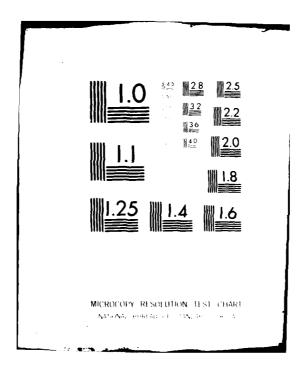
MEGATEK CORP SAN DIE80 CA F/6 17/7 OMEGA LA REUNION ANTENNA SYSTEM: MODIFICATION AND VALIDATION TE--ETC(U) JUL 79 J C HANSELHAN NO0123-78-C-0083 AD-A082 684 UNCLASSIFIED NOSC-TR-484-VOL-2 NL l ≈ 2 **Nosc**



NOSC TR 48 Volume 2

ADA 082684

NOSC TR 484 Volume 2

Technical Report 484 Volume 2

OMEGA LA REUNION ANTENNA SYSTEM: MODIFICATION AND VALIDATION TESTS

Volume 2: Data Sheets

JC Hanselman, Megatek Corp.

10 July 79

Final Report

Prepared for US Coast Guard



Approved for public release; distribution unlimited

NAVAL OCEAN SYSTEMS CENTER SAN DIEGO, CALIFORNIA 92152

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AN ACTIVITY OF THE NAVAL MATERIAL COMMAND

SL GUILLE, CAPT, USN

HL BLOOD

Commander

Technical Director

ADMINISTRATIVE INFORMATION

Electronic measurements were performed on the La Reunion OMEGA Antenna System during the month of August 1978. The work was performed under NOSC project MP01538B10 with Megatek as contractor under NOSC Technical Agreement 532-008, Contract N00123-78-C-0043.

Volume 1 of NOSC TR 484 is the report proper. Volume 2 contains data sheets.

Released by JH Richter, Head EM Propagation Division Under authority of JD Hightower, Head Environmental Sciences Department

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Volume 1 is the report proper. Volume 2 contains	data sheets.			
19. KEY WORDS (Continue on reverse side if necessary and it Omega vif navigation system Antennas — configuration Monopole antenna Measurements — electrical Radiation resistance — efficiency 20. ABSTRACT (Continue on reverse side it necessary and id				
Electronic measurements were performed of August 1978. The work was performed under N tractor. The necessary connections to the antenna operate on 11.050 kHz. The total antenna system original measurements made in 1975. An analysis wused to keep the antenna system tuned. The electrikHz and to increase slightly with frequency to 170	on the La Reunion O OSC project MP0153 helix tuning coil were resistance was measur was made of optimum cal height of the ante	8B10, with Megatek Corporation as con- ecompleted so that the station can now red and found to compare favorably with a gear ratios to use with the variometers than was found to be 163 metres for 10.2		

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20. Abstract (Continued)
with frequency from 8% to 13.8%. The station can easily radiate the designed 10 kW power.
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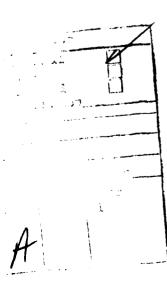
DATA SHEET 2: CANTENNA SYSTEM RESISTANCE , .DS2-1 through DS2-7

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INTRODUCTION

During the performance of modification and validation tests at OMEGA La Reunion, data and all pertinent information collected were recorded on appropriate data sheets. This information was later transcribed as necessary to data sheets designed to facilitate analysis and computation of desired operating parameters.

These data and computation sheets are presented herewith in rough form for future reference.

ANTENNA SYSTEM RESISTANCE

29 July 1978
Date Ras 10,200 Hertz 1. Frequency 2. Fixed Resistor, Z (Impedance) 0.22 µH /.00/ Ohms 3. $R_{as} = \frac{E_1 Z}{E - E_1}$ (Ohms) 4. Voltage Readings: $E = 4 \cdot 926$ Volts Trial 1 $E_1 = /$. 890 Volts $R_{as}(1) = 0.623$ Ohms $E = 4 \cdot 922 \quad Volts$ Trial 2 $E_1 = /$. 888 Volts $R_{as(2)} = 0 \cdot 623$ Ohms $E = 4 \cdot 2/8 \quad Volts$ Trial 3 $E_1 = / . 6/7$ Volts $R_{as(3)} = 0 \cdot 622$ Ohms E = 4 . 705 VoltsTrial 4 $E_1 = / . 803$ Volts $R_{as}(4) = 0 \cdot 622$ Ohms E = 4 . 923 Volts Trial 5 $E_1 = 1 \cdot 887$ Volts $R_{as}(5) = 0$. 622 Ohms

ANTENNA SYSTEM RESISTANCE

29 JULY 1978 Ras 11,050 Hertz 1. Frequency 2. Fixed Resistor, Z (Impedance) O. 22 µH /. OO/ Ohms 3. $R_{as} = \frac{E_1}{E - E_1}$ (Ohms) 4. Voltage Readings: E = 4. 870 Volts Trial 1 $E_1 = 1 \cdot 885$ Volts $R_{as}(1) = 0.632$ Ohms $E = 4 \cdot 460$ Volts Trial 2 $E_1 = 1 . 725$ Volts $R_{as(2)} = 0.631$ Ohms $E = 4 \cdot 795$ Volts Trial 3 $E_1 = /$. 855 Volts $R_{as(3)} = 0 . 632$ Ohms $E = 4 \cdot 130 \text{ Volts}$ Trial 4 $E_1 = 1 . 597$ Volts $R_{as(4)} = 0 . 631$ Ohms

$$R_{as(4)} = \frac{C}{C} \cdot \frac{631}{C} \text{ Ohms}$$

Trial 5

 $E_1 = \frac{1}{C} \cdot \frac{897}{C} \text{ Volts}$

 $R_{as(5)} = 0.63/$ Ohms

5. Average
$$R_{as} = 0$$
. 431 Ohms

ANTENNA SYSTEM RESISTANCE

29 JULY 1978
Date 11,333 Hertz 1. Frequency 2. Fixed Resistor, Z (Impedance) 0.22 µH // 00/ Ohms 3. $R_{as} = \frac{E_1}{E_1} (Ohms)$ 4. Voltage Readings: $E = 4 \cdot 593$ Volts Trial 1 $E_1 = 1 \cdot 786$ Volts $R_{as}(1) = 0.632$ Ohms $E = 4 \cdot 250$ Volts Trial 2 $E_1 = 1.650$ Volts $R_{as(2)} = 0 . 635$ Ohms $E_{\cdot} = 4 \cdot 631 \quad \text{Volts}$ Trial 3 $E_1 = /$. 790 Volts $R_{as(3)} = 0.631$ Ohms $E = 4 \cdot 208$ Volts Trial 4 $E_1 = /$. 634 Volts $R_{as}(4) = 0 \cdot 636$ Ohms $E = 4 \cdot 6/5 \quad \text{Volts}$ Trial 5 $E_1 = / . 289$ Volts $R_{as}(5) = 0 . 634$ Ohms

5. Average
$$R_{as} = 0$$
. 635 Ohms

ANTENNA SYSTEM RESISTANCE

R_{as} 29 July 1978
Date

1. Frequency

12,300 Hertz

2. Fixed Resistor, Z (Impedance) 0,22 µH /,00/ Ohms

3. $R_{as} = \frac{E_1 Z}{E - E_1}$ (Ohms)

4. Voltage Readings:

Trial 1
$$E_1 = 4 \cdot 789$$
 Volts $E_1 = 1 \cdot 934$ Volts $R_{as}(1) = 0 \cdot 678$ Ohms

Trial 2
$$E = 4 \cdot 5/7$$
 Volts $E_1 = 1 \cdot 824$ Volts

$$R_{as(2)} = 0 \cdot 678$$
 Ohms

Trial 3
$$E_1 = \frac{4 \cdot 646}{1 \cdot 876} \quad \text{Volts}$$

$$R_{as(3)} = 0 \cdot 478$$
 Ohms

Trial 4
$$E = 4 \cdot 400 \text{ Volts}$$

$$E_1 = 1 \cdot 722 \text{ Volts}$$

$$R_{as(4)} = 0 \cdot 678$$
 Ohms

Trial 5
$$E = 4 . 60$$
 Volts $E_1 = 1 . 882$ Volts

$$R_{as(5)} = 0.678$$
 Ohms

5. Average $R_{as} = 0$. 678 Ohms

APPEARED ERRATIC, RERUN.

TRIAL 1

ANTENNA SYSTEM RESISTANCE

29 JULY 1978 Ras

1. Frequency

12,300 Hertz

2. Fixed Resistor, Z (Impedance) 0.25 µH /.00/ Ohms

3.
$$R_{as} = \frac{E_1 Z}{E - E_1}$$
 (Ohms)

4. Voltage Readings:

Trial 1
$$E = 4 \cdot 285$$
 Volts $E_1 = 1 \cdot 699$ Volts $R_{as}(1) = 0 \cdot 658$ Ohms

Trial 2
$$E_1 = 4 \cdot 539 \quad \text{Volts}$$

$$E_1 = 4 \cdot 801 \quad \text{Volts}$$

$$R_{as(2)} = 0.659$$
 Ohms

Trial 3
$$E = 4 \cdot 076 \quad \text{Volts}$$

$$E_1 = 1 \cdot 66 \quad \text{Volts}$$

$$R_{as(3)} = 0 \cdot 658$$
 Ohms

Trial 4
$$E = 4 \cdot 640$$
 Volts $E_1 = 1 \cdot 839$ Volts

$$R_{as}(4) = 0 \cdot 657$$
 Ohms

Trial 5
$$E = 4 \cdot 78/$$
 Volts $E_1 = 1 \cdot 896$ Volts

$$R_{as(5)} = 0 \cdot 658$$
 Ohms

5. Average
$$R_{as} = 0$$
. 658 Ohms

AFTER 5 MINUTES OF RELAY OPERATION TRIAL 2.

ANTENNA SYSTEM RESISTANCE

R_{as} 29 July 1978

12,300 Hertz

- 1. Frequency
- 2. Fixed Resistor, Z (Impedance) O.22 µH 1.001 Ohms
- 3. $R_{as} = \frac{E_1 Z}{E E_1}$ (Ohms)
- 4. Voltage Readings:

Voltage Readings: $E = 4 \cdot 760 \text{ Volts}$ $E_{1} = 1 \cdot 89/ \text{ Volts}$ $R_{as(1)} = 0 \cdot 660 \text{ Ohms}$ $E = 4 \cdot 675 \text{ Volts}$ $E_{1} = 1 \cdot 858 \text{ Volts}$ $R_{as(2)} = 0 \cdot 660 \text{ Ohms}$ $E = 4 \cdot 127 \text{ Volts}$ $E_{1} = 1 \cdot 639 \text{ Volts}$ $R_{as(3)} = 0 \cdot 660 \text{ Ohms}$ $R_{as(4)} = 0 \cdot 660 \text{ Ohms}$ $R_{as(4)} = 0 \cdot 660 \text{ Ohms}$

Trial 5 $E = 4 \cdot 759 \quad \text{Volts}$ $E_1 = 1 \cdot 891 \quad \text{Volts}$ $R_{as(5)} = 0 \cdot 660 \quad \text{Ohms}$

Average $R_{as} = 0$. 660 Ohms REPLACED RELAX.

TRIAL 3

ANTENNA SYSTEM RESISTANCE

29 JULY 1978 Ras

1. Frequency

13,600 Hertz

2. Fixed Resistor, Z (Impedance) 0.22 µH 1.001 Ohms

3.
$$R_{as} = \frac{E_1}{E - E_1}$$
 (Ohms)

4. Voltage Readings:

 $E = 4 \cdot 6/8 \quad \text{Volts}$

 $E_1 = 1 \cdot 876$ Volts

 $R_{as(1)} = 0.685$ Ohms

E = 4.620 VoltsTrial 2

 $E_1 = 1.876$ Volts

 $R_{as(2)} = 0.684$ Ohms

E = 4.006 VoltsTrial 3

 $E_1 = / .628$ Volts

 $R_{as(3)} = 0.685$ Ohms

 $E = 4 \cdot 320 \text{ Volts}$ Trial 4

 $E_1 = 1 \cdot 756$ Volts

 $R_{as(4)} = 0.686$ Ohms

 $E = 4.3/9 \quad Volts$ Trial 5

 $E_1 = 1 \cdot 756$ Volts

 $R_{as(5)} = 0.686$ Ohms

Average $R_{as} = 0 . 685$ Ohms 5.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO/	DATE	: 3 AU	6 19	78
I _{as} 400	≠ A. K	0.9	8	K ₂ _2·_	99	K ₃	
LOOP HEIGHT	SURFACE -	(m/ft.)	TRI	POD X	HELI	COPTER _	
TYPE OF MEA	SUREMENT: HI		AL. <u>X</u>	BENCHMAR	K	ROUTIN	<u> </u>
TIME (LOCAL)	FREQUENCY (kHz)	E _g (mV)	HEADING (Mag.)	. D1	M E D2	DIST. km.	AZ. OT.
1407	10.20	24.1					
1405	13.60	34.2					
1404	11.1/3	27.1					
1403	11.05	26.4					
1402	F _t 12.30	29.3					
							
1415	10.20	24.3					
1413	13.60	34./					
1412	11-1/3	27.0					
1411	11.05	26.5					
1412 1411 1409	F _t 12.30	29.3					
							
	10.20						
	13.60					<u> </u>	
	11-1/3						
	11.05						
	F _t 12.30						
	·	·					

* NOT SURE THE ANTENNA CURRENT IS BEING COMMENT MAINTAINED AT THIS TIME. WILL TRY AGAIN AT 1430.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: REUNION SITE NO. / DATE: 3 AUG 1978									
1 _{as} 400	_ A. K	0.98	2_ 1	K ₂ _0.5	79	K ₃	· <u> </u>		
LOOP HEIGHT (ABOVE:	SURFACE -	(m/ft.)	TRII	POD <u>X</u>	HELI(COPTER _			
TYPE OF MEA	SUREMENT: H	ELICOPTER CA	AL. <u>X</u>	BENCHMAR	К	ROUTIN	E		
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.		
1430	10.20	24.9				<u> </u>			
1432	13.60	34.7				<u> </u>			
1433	11.1/3	27.5							
1434	11.05	27.0							
1435	F _t 12.30	30.2							
14.27	10.00	260				1			
1436	10.20	25.0		····			 		
1437	13.60	34.6							
1438	11-1/3	27.5							
1439	11.05	27.0				ļ			
1440	F _t 12.30	30.4							
	10.20								
	13.60								
	11-1/3								
	11.05								
	F _t 12.30								

COMMENT

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO/	DATE	: 3 AL	16 19	78
1 _{as} 400	_ A. K	0.90	<u>8</u>	K ₂ _/	00	K ₃	
LOOP HEIGHT (ABOVE:	SURFACE -	(#%./ft.)	TRI	POD	HELI	COPTER _	X
TYPE OF MEA	SUREMENT: HI	ELICOPTER CA	AL. X	BENCHMAR	к	ROUTIN	E
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
1505	10.20	22.3	020				
1504	13.60	30.6					
1500	11.1/3	25.0					
1458	11.05	24,5					
1458 1457	F _t 12.30	24,5 29.5					
	10.20					1	
	13.60					-	
	11-1/3					1	
	11.05					 	
	F _t 12.30						
	10.20					-	
	13.60					-	
	11-1/3					-	
	11.05						
	F _t 12.30						

LOOP PARALLEL TO HELD AXIS.

COMMENT NOSE TOWARD STATION

EXTREMELY NOISEY.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO/	DATE	: <u>3 AU</u>	6 17	18
Ias 400	ON: REUNION A. K	0.90	8	(₂ <u> </u>	00_	K ₃	· <u>-</u>
LOOP HEIGHT (ABOVE:	1000 SURFACE -	(5%/ft.)	TRI	POD	HELIC	COPTER	X
TYPE OF MEA	SUREMENT: HI	ELICOPTER CA	AL. <u>X</u>	BENCHMAR	K	ROUTIN	<u> </u>
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
	10.20						
	13.60						
	11.1/3						
	11.05						
15/2	F _t 12.30	27.0					
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						
	10.20					1	
	13.60						
	11-1/3						
	11.05			·······			
	F _t 12.30						

COMMENT TOO NOISEY TO USE. BACK TO THE SURFACE.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO/	DATE	: 3 AL	16 19	18
1 as 400	_ A. K	0.9	8	K ₂ _/	00	К ₃	
LOOP HEIGHT (ABOVE:	SURFACE -	(#/ft.)	TRI	POD	HELI	COPTER _	X
TYPE OF MEA	SUREMENT: H	ELICOPTER CA	AL. <u>X</u>	BENCHMAR	K	ROUTIN	Ε
TIME (LOCAL)	FREQUENCY (kHz)	E (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1540	10.20	21.9	205				
1539	13.60	29.9					
1539	11.1/3	24.6					
1538	11.05	24.4					
1536	F _t 12.30	27.0					
1545	10.20	21.7					
1544	13.60	31.2					
1543	11-1/3	23.7					
	11.05	24.0					
1542 1541	F _t 12.30	24.5					
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

LOOP PARALLEL TO HELD AXIS.

COMMENT NOSE AWAY FROM STATION. EXTREMELY NOISEX.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO/	DATE	: 3 A	UG 19	78	
$I_{as} = 400$ A. $K_1 = 0.98$ $K_2 = 1.00$ $K_3 =$								
LOOP HEIGHT (ABOVE:	1000 SURFACE -) (#./ft.)	TRI	POD	HELI	COPTER _	X	
TYPE OF MEA	SUREMENT: H	ELICOPTER C	AL. <u>X</u>	BENCHMAR	K	ROUTIN	E	
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. ot.	
1556	10.20	22.8	205					
1556	13.60	29.9						
1555	11.1/3	22,6			ļ	<u> </u>		
1554	11.05	22.6						
1553	F _t 12.30	26.9						
	10.20							
	13.60							
	11-1/3	·						
	11.05							
	F _t 12.30							
	10.20							
	13.60							
	11-1/3							
	11.05							
	F _t 12.30							

COMMENT NOSE AWAY FROM STATION. EXTREMELY NOISEY.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATE	ON: REUNION	S	ITE NO	DATE	: 3 AUG	1972	8
1 _{as} 400	_ A. K	0.90	8	K ₂	00	К ₃	· _=
LOOP HEIGHT (ABOVE:	1000 SURFACE -	(声/ft.)	TRI	POD	HELI	COPTER _	X
TYPE OF MEA	SUREMENT: HI	ELICOPTER CA	AL	BENCHMAR	К	ROUTIN	X
TIME (LOCAL)	FREQUENCY (kHz)	E (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1608	10.20	32.6	207				
1608	13.60	43.5					
1607	11.1/3	36.6				ļ	
1606	11.05	34.8					
1604	F _t 12.30	39.5					
						1	
	10.20				· · · · · · · · · · · · · · · · · · ·		
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						
						· · · · · · · · · · · · · · · · · · ·	
	10.20						
	13.60					ļ	
	11-1/3						
	11.05						
	F _t 12.30						

LOOP PARALLEL TO HELO AXIS.

COMMENT NOSE AWAY FROM STATION.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	s	ITE NO	<u>?</u> DATE	: 3 AL	16 19	78
	_ A. K						
LOOP HEIGHT (ABOVE:	SURFACE -	(/ft.)	TRI	POD X	. HELI	COPTER _	
TYPE OF MEA	SUREMENT: H	ELICOPTER CA	AL. 🗶	BENCHMAR	К	ROUTIN	Ε
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
1627	10.20	37.3	205				
1625	13.60	51.4					
1624	11.1/3	41.4					
1624	11.05	40.5					
1623	F _t 12.30	46.2					
						1	1
1632	10.20	36.8				 	
1631	13.60	51.2				<u> </u>	
1630	11-1/3	41.6				<u> </u>	
1629	11.05	40.4					
1628	F _t 12.30	46.1					
	10.20	240				1	
1633	1	36.8					
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: REUNION SITE NO. 2 DATE: 3AUG 1978								
	_ A. K							
LOOP HEIGHT (ABOVE:	SURFACE -	(m./ft.)	TRI	POD	HELI	COPTER _	X	
TYPE OF MEAS	SUREMENT: H	ELICOPTER CA	AL. X	BENCHMAR	K	ROUTIN	<u> </u>	
TIME (LOCAL)	FREQUENCY (kHz)	E (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. ot.	
1650	10.20	35.0	210					
1649	13.60	50.4						
1648	11.1/3	40.8	· · · · · · · · · · · · · · · · · · ·					
1647	11.05	38.6				ļ		
1646	F _t 12.30	44.6						
	10.20	· · · · · · · · · · · · · · · · · · ·				1		
	13.60				<u> </u>	 		
	11-1/3					1		
	11.05							
1651	F _t 12.30	44,3						
	10.20							
	13.60					 	ļ 	
	11-1/3					1		
	11.05							
	F _t 12.30							

LOOP PARALLEL TO HELDAXIS.

COMMENT NOSE AWAY FROM STATION.

RAN OUT OF TIME (FUEL RESERVE)

RADIO FIELD INTENSITY MEASUREMENTS

UMEGA STATI	ON: REUNION		TIE NO. Z	<u>. </u>	: 4 AU	4 /4'	18_
1 _{as} 400	_ A. K	. 0.98	2	K ₂ _ <u>O</u>	99	K ₃	· <u> </u>
LOOP HEIGHT (ABOVE:	SURFACE -	(#/ft.)	TRI	POD X	HELI	COPTER _	·
TYPE OF MEA	SUREMENT: H	ELICOPTER CA	AL. <u>X</u>	BENCHMAR	К	ROUTIN	Ε
TIME (LOCAL)	FREQUENCY (kHz)	E (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. ot.
0931	10.20	39.2	25				
0930	13.60	52.3					
0929	11.1/3	42.6		·			
0928	11.05	41.9	i	· · · · · · · · · · · · · · · · · · ·	 		
0928	F _t 12.30	48.5					
0939	10.20	39.1					
0938	13.60	51.9					
0936	11-1/3	42.6					
0934	11.05	42.2					
0933	F _t 12.30	48,6					
	10.20			·			
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

LOOP ON WEST SIDE OF HELO.

COMMENT

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	s	ITE NO. 🟒	. DATE	: 4 AU	6 197	<u>'8</u>
1 _{as} 400	ON: REUNION A. K	0.9	8	x ₂ <u>D</u> .	99	K ₃	·
LOOP HEIGHT (ABOVE:	SURFACE -	(\$ /ft.)	TRI	POD X	HELI	COPTER _	
TYPE OF MEA	SUREMENT: HI	ELICOPTER CA	AL. X	BENCHMAR	К	ROUTIN	E
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1003	10.20	37.3					
1002	13.60	49.6					
1001	11.1/3	40.6					
1000	11.05	39.9					
0959	F _t 12.30	44.2					
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						
	10.20			7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	 		
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

LOOP ON EAST SIDE OF HELD.

COMMENT

LARGE DIFFERENCES IN FIELD FOR A SHORT CHANGE IN DISTANCE PROVED THE SITE BAD.

RADIO FIELD INTENSITY MEASUREMENTS

OHEGA SIAII	ON: KEUNTON	>	116 NU	DATE	: 4 190	4 17	/ 8
1 _{as} 400	<u>2</u> A. K	0.98	<u>7</u> _	K ₂ _0.	99	K ₃	· <u> </u>
LOOP HEIGHT	SURFACE -	(p./ft.)	TRI	POD X	HELI	COPTER _	
	SUREMENT: HE					ROUTIN	
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1035	10.20	25.2	15				
1039	13.60	34.8	+				
1041	11.1/3	27.4					
1042	11.05	27.4					
1043	F _t 12.30	30.2					
1054	10.20	26.0	16			1	
1053	13.60	36.3	#				
1051	11-1/3	28.2					
1050	11.05	27.9					
1048	F _t 12.30	31.1			·		
	10.20						
	13.60					 	
	11-1/3						
	11.05						
	F _t 12.30						

\$ LOOP ON WEST SIDE OF HELD.

COMMENT # LOOP ON EAST. SIDE OF HELD.

RADIO FIELD INTENSITY MEASUREMENTS

TYPE OF MEASUREMENT: HELICOPTER CAL. X BENCHMARK ROUT	X
	TINE
TYPE OF MEASUREMENT: HELICOPTER CAL. X BENCHMARK ROUT	TINE
TIME EREQUENCY E HEADING D.M.E. DIS-	
TIME FREQUENCY E_g HEADING D M E DIST (LOCAL) (kHz) (mV) (Mag.) D1 D2 km.	
1/28 10.20 25.2 105	
1/27 13.60 36.2	
1/26 11.1/3 28.3	
1/25 11.05 27.5	
1/23 Ft 12.30 30.7	
10.20	
	_
13.60	
11-1/3	
11.05	
F _t 12.30	
10.20	
13.60	
11-1/3	
11.05	
F _t 12.30	

* BLUE LOOP MOUNTED PERPENDICULAL TO COMMENT AXIS OF HELD FOR MINIMUM NOISE. LOOP TOWARD THE STATION.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO	DATE	: 4 AL	16 19	78
1 _{as} 400	_ A. K	0.98	2	K ₂ _ <i>D</i> . 5	79*	к ₃	· _=
LOOP HEIGHT (ABOVE:	SURFACE -	(s./ft.)	TRI	POD	HELI	COPTER	<i>X</i>
TYPE OF MEA	SUREMENT: H		AL. X	BENCHMAR	K	ROUTIN	E
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
1142	10.20	24.8	290				
1141	13.60	34.9					
1138	11.1/3	27.5					
1137	11.05	27.3					
1135	F _t 12.30	30,1					
	10.20					1	
	13.60						
	11-1/3				· · · · · · · · · · · · · · · · · · ·		
	11.05						
	F _t 12.30						
	10.20						
	13.60					 	
	11-1/3						
	11.05					 	
	F _t 12.30						

* BLUE LOOP MOUNTED PERPENDICULAR TO COMMENT AXIS OF HELO FOR MINIMUM NOISE. LOOP AWAY FROM THE STATION,

RADIO FIELD INTENSITY MEASUREMENTS

OMECA STATE	ON: REUNION	s	ITE NO/	DATE	: 4 Au	6 19%	18
	<u> </u>						
LOOP HEIGHT (ABOVE:	/ OOO SURFACE -	(m./ft.)	TRI	POD	HELI	COPTER _	X
TYPE OF MEA	SUREMENT: H	ELICOPTER CA	AL	BENCHMAR	К	ROUTIN	E <u>X</u>
TIME (LOCAL)	FREQUENCY (kHz)	E (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
1/52	10.20	26.5	120				
1151	13.60	36.5					
1150	11.1/3	28.5					
1149	11.05	28.1				<u> </u>	
1147	F _t 12.30	31,3					
	10.20				·	1	
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						
						1	
	10.20				· · · · · · · · · · · · · · · · · · ·	 	
	13.60					 	
	11-1/3					-	
	11.05					<u> </u>	
	F _t 12.30						

LOOP TOWARD STATION.

COMMENT

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO	<u>DATE</u>	: 4 AU	16 197	18
	_ A. K						
LOOP HEIGHT (ABOVE:	1000 SURFACE -	(5./ft.)	TRI	POD	HELI	COPTER _	X
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	K	ROUTIN	E <u>X</u>
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1446	10.20	46.6	335				
1445	13.60	65.0				<u> </u>	
1445	11.1/3	54.1				<u> </u>	
1444	11.05	51.9			<u> </u>		
1441	F _t 12.30	55.0					
	10.20						
	13.60						
	11-1/3						
	11.05			: 		<u> </u>	
	F _t 12.30						
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT LOOP TOWARD STATION.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	\$	115 NO. <u>4</u>	DATE	: 4 AU	6 197	<u>8</u>
Ias 400	_ A. K	0.98	?	K ₂ _ <u>0</u> . 4	79	K ₃	. 00
LOOP HEIGHT (ABOVE:	JOOD SURFACE -	(5./ft.)	TRI	POD	HELI	COPTER _	_X
TYPE OF MEA	SUREMENT: HI		AL	BENCHMAR	к	ROUTIN	E X
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
1458	10.20	40.9	350				
1457	13.60	54,0					
1456	11.1/3	44.9					
	11.05	43.2					
1455 1454	F _t 12.30	49.4					
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT STRONG CROSS WIND, & 25 KNOTS. SHORT OF FUEL.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	s	ئےITE NO	DATE	: 4 AU	G 197	8
I _{as} 400	_ A. K	<u>. 0</u> . 90	8	K ₂ _ Q · 9	79	K ₃	. <u>02</u>
LOOP HEIGHT (ABOVE:	300 SURFACE -	(m/45.)	TRI	POD	HELI	COPTER _	_×_
TYPE OF MEA	SUREMENT: HI		AL	BENCHMAR	K	ROUTIN	<u> </u>
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1537	10.20	33.8	175				
1536	13.60	44.3				<u> </u>	
1535	11.1/3	36.2				<u> </u>	
1534	11.05	35.0				<u> </u>	
1533	F _t 12.30	40.0					
1546	10.20	33.7	180				
1545	13.60	44.1					
1545	11-1/3	36.8					
1543	11.05	35.8					
1542	F _t 12.30	40.8					
	10.20						
	13.60		······				
	11-1/3						
	11.05						
	F _t 12.30						

LOOP AWAY FROM STATION.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	<u> </u>	ITE NO	DATE	: 4 AU	16 19	78
	<u>)</u> A. K						
LOOP HEIGHT (ABOVE:	400 SURFACE -	(m./#.)	TRI	POD	HELI	COPTER _	<u>X</u>
TYPE OF MEA	SUREMENT: H	ELICOPTER C	AL	BENCHMAR	K	ROUTIN	E X
TIME (LOCAL)	FREQUENCY (kHz)	E (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. ot.
1601	10.20	28.1	195				
1600	13.60	36.8					
1559	11.1/3	30.2					
1558	11.05	29.1					
1557	F _t 12.30	33.3					
16/0	10.20	28.7	190				
1609	13.60	37.0	·			<u> </u>	
1608	11-1/3	30.6		· · · · · · · · · · · · · · · · · · ·	!		
1608	11.05	29.5	·	· · · · · · · · · · · · · · · · · · ·			
1606	F _t 12.30	34.3					<u> </u>
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

LOOP AWAY FROM STATION.

COMMENT

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO/	DATE	: 8 AU	G 197	8
$K_{as} = \frac{400 + A}{1}$ $K_{1} = \frac{0.98}{1}$ $K_{2} = \frac{0.99}{1}$ $K_{3} = \frac{1}{1}$							
LOOP HEIGHT 6 (/ft.) TRIPOD X HELICOPTER (ABOVE: SURFACE - SECRETED)							
TYPE OF MEA	SUREMENT: HI		AL. <u>X</u>	BENCHMAR	K		
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2		
1542	10.20	24,5	18				
1541	13.60	33.4					
1540	11.1/3	26.7					
1539	11.05	26.3					
1538	F _t 12.30	29.8					
1549	10.20	24.4					
1548	13.60	33.Z					
1547	11-1/3	26.7					
1547	11.05	26.3					
1546	F _t 12.30	29.7					
1556	10.20	24.4					
1555	13.60	33.3					
1554	11-1/3	26.7					
1552	11.05	26.3					
1551	F _t 12.30	29.8					

COMMENT * ANTENNA CURRENT BEING MEASURED WRONG.

LOOP ON THE SEAWARD (LEFT) SIDE OF HELICOPTER.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO	DATE	: 8 AU	67 147	<u>8</u>		
1 _{as} 400	$I_{as} = 400 + 1.$ $K_1 = 0.98$ $K_2 = 0.99$ $K_3 = .=$								
LOOP HEIGHT (ABOVE:	SURFACE -	(=/ft.)	TRI	POD	HELI(COPTER _	X		
TYPE OF MEASUREMENT: HELICOPTER CAL BENCHMARK						ROUTINE			
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. oT.		
1619	10.20	23.6	107						
1618	13.60	33.4							
1617	11.1/3	26.4							
1616	11.05	26.1		, <u>, , , , , , , , , , , , , , , , , , ,</u>					
1615	F _t 12.30	29.9							
1625	10.20	24.0	107						
1624	13.60	32.9							
1623	11-1/3	26.6							
1622	11.05	25.7							
1621	F _t 12.30	29.6							
1632	10.20	24.1	110						
1631	13.60	33.3							
	11-1/3	26.9		1					
1628	11.05	26.1							
1630 1628 1627	F _t 12.30	30.1							

LANTENNA CURRENT BEING MEASURED WRONG.

LOOP TOWARD STATION. HELICOPTER WITH FLOATS.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: PEUNION	S	ITE NO/	DATE	: 8 AL	16 19%	78
1 _{as} 400	_ ≠ A. K	<u>. 0 · 98</u>	<u> </u>	K ₂ <u>0</u> .	99	K ₃	· <u> </u>
LOOP HEIGHT	SURFACE -	(∉ /ft.)	TRI	POD	HELI	COPTER _	X
TYPE OF MEA	SUREMENT: H		AL. X	BENCHMAR	K	ROUTIN	E
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1641	10.20	24.0	285			<u> </u>	
1640	13.60	33.1				<u> </u>	
1640	11.1/3	27.3			·	<u> </u>	
1638	11.05	26.6					
1637	F _t 12.30	30.3					
1// 4/	10.20		200			1	<u> </u>
1646	10.20	24.1	285			 	
1645	13.60	33.0				<u> </u>	
1644	11-1/3	26.8				<u> </u>	
1643	11.05	26.4			···		
1642	F _t 12.30	30.1					
1654	10.20	24.0	205			1	
1652	13.60	33.5				†	
145/	11-1/3	27.2					
1650	11.05	26.8		 			
1648	F _t 12.30	30.1					

*ANTENNA CURRENT BEING MEASURED WRONG.

COMMENT LOOP AWAY FROM THE STATION.

HELICOPTER WITH FLOATS.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO/	DATE	: 8 AL	16 19	78
1 _{as} 400	_ - ⊁A. K	0.92	<u>8</u>	K ₂ _0.4	99	K ₃	. 01
LOOP HEIGHT (ABOVE:	SURFACE -	(\$/ft.)	TRI	POD	HELI	COPTER _	×
TYPE OF MEA	SUREMENT: HI		AL	BENCHMAR	К	ROUTIN	E _X_
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1705	10.20	24.8					
1704	13.60	34.2					
1704	11.1/3	27,9					
1702	11.05	27.3				ļ	
1701	F _t 12.30	30.0					
1712	10.20	24,1					
1711	13.60	33.5				ļ	
1710	11-1/3	27.6					
1708	11.05	26.8					
1707	F _t 12.30	29.9		-			
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

* ANTENNA CURRENT BEING MEASURED WRONG.

COMMENT NOT USED FOR HEIGHT-GAIN MEASUREMENTS,

OR RADIATED POWER CALCULATIONS.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	OMEGA STATION: REUNION SITE NO. A / DATE: 9 AUG 1978								
1 _{as} 400	$I_{as} 400 A.$ $K_{1} 0.98$ $K_{2} 0.99$ $K_{3} 1.01$								
LOOP HEIGHT 1000 (#/ft.) TRIPOD HELICOPTER X									
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	К	ROUTIN	X		
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.		
1024	10.20	27.3	335	24478	17519	28.1	044		
1023	13.60	37.3		24425	17531	28.0	044		
1021	11.1/3	29.0		24481	17450	28.1	044		
1020	11.05	29.1		24483	17481	28.1	044		
1018	F _t 12.30	34.5		24502	17483	28.1	044		
1030	10.20	20 2		22445	10151	200	611		
		28.3			17451				
1029	13.60	36.3			17407				
1027	11-1/3	30.1		24405	17420	28.0	045		
1026	11.05	29.7		24461	17543	28.1	044		
1025	F _t 12.30	34.7		24445	17522	28.0	044		
	10.20								
	13.60								
	11-1/3								
	11.05								
	F _t 12.30								

COMMENT

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: REUNION SITE NO. A2 DATE: 9 AUG 1978										
Ias 400	$I_{as} = 400$ A. $K_1 = 0.98$ $K_2 = 0.99$ $K_3 = 1.01$									
LOOP HEIGHT (ABOVE:	LOOP HEIGHT / OOO (*/ft.) TRIPOD HELICOPTER X									
TYPE OF MEA	SUREMENT: HI		AL	BENCHMAR	K	ROUTIN	E <u>X</u>			
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.			
1042	10.20	32.5	335	20503	17 728	23.9	045			
1041	13.60	42.9		20439	17 795	23.9	045			
1039	11.1/3	34,6		20392	17751	23.8	045			
1038	11.05	34.7		20407	17775	23-8	045			
1037	F _t 12.30	39.8		20432	17778	23.8	045			
1050	10.20	32.9		20246	17880	23.7	045			
1047	13.60	42.6		20315	17782	23.7	045			
1048	11-1/3	35.3	·	20307	17791	23.7	045			
1044	11.05	33.6		20333	17785	23.8	045			
1043	F _t 12.30	39.9		20507	17763	23.9	045			
	10.20									
	13.60									
	11-1/3									
	11.05									
	F _t 12.30									

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: REUNION SITE NO. A3 DATE: 9 AUG 1978										
	I _{as} 400 A. K ₁ 0.98 K ₂ 0.99 K ₃ 1.01									
LOOP HEIGHT (ABOVE:	LOOP HEIGHT 1000 (A/ft.) TRIPOD HELICOPTER X (ABOVE: SEA LEVEL)									
TYPE OF MEASUREMENT: HELICOPTER CAL BENCHMARK ROUTINEX										
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.			
1107	10.20	38.2	330	16931	19118	20.3	045			
1105	13.60	50.1		16850	19212	20.2	045			
1102	11.1/3	42.6		16828	19245	20,2	045			
1104	11.05	40.2		16865	19211	20.2	045			
1100	F _t 12.30	46.5		16910	19239	20.3	045			
1112	10.20	38.4		16827	19228	20.2	045			
11//	13.60	50.2		16858	19209	20.2	045			
1110	11-1/3	41.7		16885	19175	20.2	045			
1109	11.05	40.5		16867	19265	20.2	045			
1108	F _t 12.30	46.5		16869	19220	20.2	045			
	10.20									
	13.60									
	11-1/3									
	11.05									
	F _t 12.30									

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: REUNION SITE NO. A4 DATE: 9 AUG 1978									
I _{as} 400 A. K ₁ 0.98 K ₂ 0.99 K ₃ 1.01									
LOOP HEIGHT (ABOVE:	LOOP HEIGHT 1000 (#/ft.) TRIPOD HELICOPTER X								
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	к	ROUTIN	E <u>X</u>		
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. ot.		
1134	10.20	45.6	325	13050	21653	16.4	043		
1133	13.60	60.5		13064	21677	16.5	043		
1/32	11.1/3	50.3		13077	21636	16.5	043		
/13/	11.05	49.0		13137	21575	16.5	043		
1130	F _t 12.30	54.9		13208	21535	16.6	043		
1140	10.20	46.3		12895	21746	16.3	043		
1/39	13.60	61.5		12887	21739	16.3	043		
//38	11-1/3	5/.3		12847	21812	16.2	043		
1137	11.05	49.5		12930	21743	16.3	043		
//35	F _t 12.30	55.1		13025	21653	16.4	043		
	10.20								
	13.60								
	11-1/3								
	11.05								
	F _t 12.30								

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: REUNIU SITE NO. B / DATE: 10 AUG 1978									
$I_{as} = 400 \text{ A.}$ $K_1 = 0.98$ $K_2 = 0.99$ $K_3 = 1.01$									
LOOP HEIGHT 1000 (/ft.) TRIPOD HELICOPTER X									
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	К	ROUTIN	E <u>X</u>		
TIME (LOCAL)	FREQUENCY (kHz)	E _g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.		
1012	10.20	30.4	270	21585	43483	27.1	345		
1009	13.60	41.3		21608	43489	27.1	345		
1008	11.1/3	33.1		21655	43503	27.2	345		
1007	11.05	31.9		21604	43468	27.1	345		
1006	F _t 12.30	37.7		21604	43430	27.1	345		
1020	10.20	31.1		21735	43656	772	345		
1016	13.60	42.0			43650				
1015	11-1/3	34.0			43625				
1014	11.05	32.9			43 627				
1013	F _t 12.30	37.9			43.585				
	10.20								
	13.60								
	11-1/3								
	11.05								
	F _t 12.30								

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION		ITE NO. $\underline{\mathcal{B}}$	2 DATE	: 10 A	16 19	778			
	_ A. K									
LOOP HEIGHT (ABOVE:	LOOP HEIGHT / OOO (/ft.) TRIPOD HELICOPTER X (ABOVE: SEA LEVEL)									
TYPE OF MEA	SUREMENT: HI		AL	BENCHMAR	K	ROUTIN	<u> </u>			
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.			
1033	10.20	35,5	215	17701	40 963	23,2	345			
1032	13.60	48.7		17725	40957	23.3	345			
1031	11.1/3	39.5		17756	40936	23.3	346			
1030	11.05	38.3		17692	40879	23.2	346			
1029	F _t 12.30	44.0		17847	40973	23.4	346			
1053	10.20	35,5		18002	41377	23.5	345			
1052	13.60	48.8		17939	41350	23.5	345			
1051	11-1/3	39.2		17854	41350	23.4	344			
1050	11.05	38.3		17833	41303	23.4	345			
1049	F _t 12.30	44.6		17750	41201	23.3	345			
	10.20									
	13.60									
	11-1/3									
	11.05									
	F _t 12.30									

LOOP TOWARD STATION.

COMMENT

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: REUNION SITE NO. $B3$ DATE: $10 AUG 1978$									
Ias 400	$K_{as} = 400$ A. $K_{1} = 0.98$ $K_{2} = 0.99$ $K_{3} = 1.01$								
LOOP HEIGHT (ABOVE:	LOOP HEIGHT / DOO (\$1/ft.) TRIPOD HELICOPTER X (ABOVE: \$500 - SEA LEVEL)								
TYPE OF MEA	SUREMENT: HI	ELICOPTER CA	AL	BENCHMAR	К	ROUTIN	<u>X</u>		
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.		
1103	10.20	42.5	275	14057	39002	19.6	345		
1102	13.60	58.8		14027	38953	19.6	345		
1101	11.1/3	47.1		14074	38912	19.6	346		
1100	11.05	46.1		14079	38869	19.6	346		
1059	F _t 12.30	52.1		14055	38778	19.6	346		
1108	10.20	42.7		14104	39/74	19.6	345		
1107	13.60	59.3		14067	39099	19.6	345		
1106	11-1/3	47.7		14051	39092	19.6	345		
1105	11.05	46.6		14035	39063	19.6	345		
1105	F _t 12.30	53.1		14049	39044	19.6	345		
	10.20								
	13.60								
	11-1/3								
	11.05								
	F _t 12.30								

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: REUNION SITE NO. B4 DAIT: 10 AUG 1979										
$I_{as} 400 A.$ $K_{1} 0.98$ $K_{2} 0.99$ $K_{3} 1.01$										
LOOP HEIGHT (ABOVE:	LOOP HEIGHT 1000 (C./ft.) TRIPOD HELICOPTER X (ABOVE: SEA LEVEL)									
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	К	ROUTIN	<u> </u>			
TIME (LOCAL)	FREQUENCY (kHz)	E _g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.			
1127	10.20	56.2	275	9673	36271	15.3	348			
1125	13.60	76.8		9685	36/72	15.3	349			
1124	11.1/3	61.5		9722	36088	15.3	349			
1123	11.05	59.5		9751	36/35	15.4	349			
1122	F _t 12.30	67.6		9746	35989	15,4	350			
1132	10.20	55,9		9733	36409	15.3	348			
1131	13.60	77.2		9648	36295	15.2	348			
1130	11-1/3	62.8		9688	36340	15.3	348			
1129	11.05	61.5		9588	36276	15.2	348			
1128	F _t 12.30	69.7		9610	36282	15.2	348			
1138	10.20	55.5		9848	36368	15.4	348			
1137	13.60	76.3			36370					
1136	11-1/3	62.6			36360					
1135	11.05	60.5			36364					
	F _t 12.30	69.5		9783	36358					

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO. C	_/ DATE	: 10 A	UG 19	78
Ias 400	_ A. K	0.98	8	K ₂ <u>0</u> .5	79	K ₃	. <u>01</u>
LOOP HEIGHT (ABOVE:	1000	(æ/ft.) SEA LEVEL)	TRI	POD	HELIC	OPTER _	_X_
	SUREMENT: HI						E X
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
	10.20		215				i
	13.60						
	11.1/3						
1440	11.05	30.7		28820	44326		
1438	11.05 F _t 12.30	30.7 34.1		28862	44326 44168		
	10.20					·	
	13.60			-			
	11-1/3						
	11.05						
	F _t 12.30						
·							
	10.20	·					
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

FLIGHT CANCELLED DUE TO ERRATIC OPERATION

COMMENT OF DME. INSPECTION OF TRANSPONDER SITE

FOUND TRANSPONDER BEHIND TREES AND 150

METERS OUT OF POSITION.

RADIO FIELD INTENSITY MEASUREMENTS

CMEGA STATI	ON: REUNION	S	ITE NO. C	<u>3</u> DATE	: 10 AU	16 14%	78			
Ias 400	$K_{as} = \frac{400}{100} \text{ A.} K_1 = \frac{0.98}{100} K_2 = \frac{0.99}{100} K_3 = \frac{1.01}{100}$									
LOOP HEIGHT	1000 SERVEE -	(#/ft.)	TRI	POD	HELIC	OPTER _	X			
(ABOTE.	TOTAL -	JEN ELVEL								
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	K	ROUTIN	<u> </u>			
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.			
1631	10.20	41.0	NOT	19729	38800	2016	284			
1630	13.60	58.8	RECORDED	19691	1		ı			
1629	11.1/3	45.9		19657	38678	2015	284			
1627	11.05	43.7		20011	39205	20.9	285			
1626	F _t 12.30	48.9		20350	38609	21.0	282			
1400	10.00	10 =		1000	2004-	22 (200			
1637	10.20	40.5			38940					
1635	13.60	57.1		19730	38843	20.6	284			
1634	11-1/3	45.5		19726	38814	20.6	284			
1633	11.05	44.5		19722	38810	20.5	284			
1632	F _t 12.30	49.5			38807		1			
<u></u>			·							
	10.20									
	13.60									
	11-1/3									
	11.05									
	F _t 12.30									

COMMENT POSITIONS "CW" FROM THE BASELINE LOOP TOWARD STATION.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: REUNION SITE NO. C.2 DATE: 10 AUG 1978											
1 _{as} 400	I _{as} 400 A. K ₁ 0.98 K ₂ 0.99 K ₃ 1.01										
LOOP HEIGHT (ABOVE:	LOOP HEIGHT /OOO (=./ft.) TRIPOD HELICOPTER X										
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	к	ROUTIN	E <u>X</u>				
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.				
1604	10.20	33.4	205	24215	40924	24.8	280				
1603	13.60	46.2		24206	40867	24.8	280				
1602	11.1/3	36.9		24175	40870	24.8	280				
1602	11.05	36.1		24255	40880	24.8	280				
1601	F _t 12.30	41.8		24241	40779	24.8	280				
1610	10.20	33.6	*	26247	41256	24.9	281				
1609	13.60	45.5	*	26230	41175	24.9	281				
1608	11-1/3	37.3	*	26219	41067	24.9	281				
1607	11.05	35.5	*	26281	4//34	24.9	281				
1605	F _t 12.30	41.5	*	26253	4/235	24,9	281				
	10.20										
	13.60										
	11-1/3										
	11.05										
	F _t 12.30										
······································	SOME T	ROURIE		DALLI E	LUCTUAT						

* SOME TROUBLE WITH DMU. FLUCTUATING IN THE COMMENT SECOND DIGIT. DETER MINED THAT THE NUMBER SHOULD HAVE BEEN 24 XXX SO USED THAT FOR CALCULATIONS. LOOP TOWARD STATION. POSITIONS "CW" FROM THE BASELINE.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: REUNION SITE NO. C 4 DATE: 10 A UG 1978										
$I_{as} 400$ A. $K_1 0.98$ $K_2 0.99$ $K_3 1.01$										
LOOP HEIGHT 1000 (1/ft.) TRIPOD HELICOPTER X										
TYPE OF MEASUREMENT: HELICOPTER CAL BENCHMARK ROUTINE										
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. ot.			
1658	10.20	57.6	215	14246	35652	15.1	287			
1656	13.60	79.3		14203	35649	15.0	287			
1655	11.1/3	64.3		14186	35610	15.0	287			
1654	11.05	63.9		14125	35426	14.9	286			
1653	F _t 12.30	70.1			35505					
1705	10.20	57.0		14135	35910	15.1	288			
1703	13.60	78.4		14120	35772	15.0	288			
1702	11-1/3	62.8		14149	35764	15.0	288			
1700	11.05	62.3		14238	35697	15.1	287			
1659	F _t 12.30	69.9			35700					
	10.20									
	13.60									
	11-1/3									
	11.05									
	F _t 12.30									

RADIO FIELD INTENSITY MEASUREMENTS

UMEGA STATI	ON: REUNION	S	ITE NO	<u>/ </u>	: 16 A	UG 19	18
1 _{as} 400	≠ A. K	0.98	7	K ₂ <u>0</u> .	79_	K ₃	· <u>-</u>
LOOP HEIGHT (ABOVE:	SURFACE -	(m./ft.)	TRI	POD X	HELIC	COPTER _	
TYPE OF MEA	SUREMENT: HI	ELICOPTER CA	AL	BENCHMAR	K <u>X</u>	ROUTIN	E
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D1	M E D2	DIST. km.	AZ. OT.
1601	10.20	27.2					
1600	13.60	36,4					
1559	11.1/3	30,5					
1558	11.05	29.3					
1556	F _t 12.30	33,6					
1606	10.20	27.1					
1605	13.:60	36.4					
1604	11-1/3	30.5					
1603	11.05	29.3					
1602	F _t 12.30	33.7					
1623	10.20	27.1	7				
1621	13.60	36.5					
16/8	11-1/3	30.2	MEA	SURED	By	FOUYET	•
1615	11.05	29.3					
1611	F _t 12.30	33,4					

COMMENT # UNTIL 1600 LST. AT THIS TIME THE MILITARY
STATION CREW GO HOME.
AT GILOT AIRPORT.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO. <u>/</u>	DATE	: <u>18 A</u>	06/	978
Ias 400	<u>)</u> A. K	0.9	8	K ₂ <u>O</u> .	99	K ₃	· _=
LOOP HEIGHT (ABOVE:	SURFACE -	(M./ft.)	TRI	POD X	HELI	COPTER _	
TYPE OF MEA	SUREMENT: H	ELICOPTER CA	AL	BENCHMAR	к <u>Х</u>	ROUTIN	E
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)		M E D2	DIST. km.	AZ. OT.
1024	10.20	25.1					
1022	13.60	34.5					
1021	11.1/3	27.3					
1019	11.05	27.1					
1018	F _t 12.30	30.3					
1100	10.20	210				1	<u> </u>
1108	13.60	24,9 34.8				 	
1106	11-1/3	27.6				 	
	11.05	27.4					
1059	F _t 12.30	30.2					
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT MEASURED BY HANSELMAN.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	<u>. </u>	ITE NO/	DATE	: 18 A	UG 19	78
	<u>)</u> A. K						
LOOP HEIGHT (ABOVE:	SURFACE -	(*/ft.)	TRI	POD X	_ HELI	.COPTER _	
TYPE OF MEA	SUREMENT: H	ELICOPTER C	AL	BENCHMAR	K <u>X</u>	ROUTINE	E
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D1 D	M E D2	DIST.	AZ. ot.
1041	10.20	24.6				1	
1039	13.60	34,9					
1036	11.1/3	27.4					
1032	11.05	27.2					
1028	F _t 12.30	30.3					
			1		1		·
1057	10.20	24.7					ļ
1054	13.60	34.8				!	
1050	11-1/3	27.7					
1048	11.05	27.3					
1045	F _t 12.30	30.2	-				
	10.20				<u> </u>	1	
	10.20						<u> </u>
	13.60	 				4	
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT MEASURED BY FOUYET.

RADIO FIELD INTENSITY MEASUREMENTS

OHEGA STATI	ON: REUNION	<u> </u>	ITE NO/	DATE	: 19 A	UG /	978			
1 _{as} 400	<u>></u> A. κ	<u>. 0.98</u>	?	K ₂ _ D · _	99	к _з				
LOOP HEIGHT (ABOVE:	OOP HEIGHT 6 UK./ft.) TRIPOD X HELICOPTER (ABOVE: SURFACE - SERVER)									
TYPE OF MEA	SUREMENT: H	ELICOPTER CA	AL. <u>X</u>	BENCHMAR	К	ROUTIN	Ε			
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.			
0917	10.20	24.6	016							
0916	13.60	34.0								
0915	11.1/3	27.1								
0914	11.05	26.8								
0913	F _t 12.30	30.2								
0923	10.20	24.6								
0922	13.60	33.9								
0921	11-1/3	27.1								
0920	11.05	26.7			<u></u>					
0919	F _t 12.30	30.3								
\overline{X}	10.20	24.60								
	13.60	33.95								
	11-1/3	27.10								
	11.05	26.75								
	F _t 12.30	30.25								

COMMENT LOOP SEAWARD FROM HELO.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	s	ITE NO	DATE	: 19 A	UG 19	78
	<u>></u> A. κ						
LOOP HEIGHT (ABOVE:	SURFACE -	() (./ft.)	TRI	POD	HELI	COPTER _	X
	SUREMENT: H	•	•		RK		
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. °T.
0946	10.20	24,6	105				
0945	13.60	34,0					
0944	11.1/3	26.6					
0942	11.05	26.7	<u> </u>				
0941	F _t 12.30	30,1					
0958	10.20	24.9					
0957	13.60	34,0					
0956	11-1/3	27.2					
0954	11.05	27.0					
0953	F _t 12.30	30.4					
V	10.20	24.75		 	1	1	
	13.60	34,00					
	11-1/3				 		
	11.05	26.85					
	F _t 12.30	26.90 26.85 30.25					

COMMENT R.A.S., HELO. REGULAR LANDING SKIDS.

LOOP PERPENDICULAR TO AXIS OF HELO.

LOOP TOWARD THE STATION.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: <u>REUNION</u>	S:	TE NO/	DAT	E: <u>/</u> 9	AUG	1978
1 _{as} 400	2 A. K	0.98	8	· 2 _ O ·	99	K ₃	· _=
LOOP HEIGHT (ABOVE:	SURFACE -	(M./ft.) SEA LEVEL)	TRI	POD	_ HEL	_ICOPTER _	<u> </u>
TYPE OF MEA	SUREMENT: H		NL. X	BENCHMA	RK	ROUTIN	IE
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1006	10.20	24.6	285	 			
1005	13.60	34,6					
1004	11.1/3	27.5					
1003	11.05	27.0					
1002	F _t 12.30	30,1					
1012	10.20	24.2					
1011	13.60	34,2			<u> </u>		
1009	11-1/3	27.4					
1008	11.05	26.9					
1007	F _t 12.30	29.7		,			
X	10.20	24.40					
	13.60	34,40					
	11-1/3	27.45					
	11.05	26.95					
	F _t 12.30	27,45 26.95 29.90					

COMMENT R.A.S. HELO. REGULAR LANDING SKIDS.

LOOP PERPENDICULAR TO AXIS OF HELO.

LOOP AWAY FROM THE STATION.

RADIO FIELD INTENSITY MEASUREMENTS

UMEGA STATT	ON: REUNION		TTE NO. /	DATE	: 17 /	UG 17	78
1 _{as} 400	<u>Р</u> А. К	0.98	8	K ₂ _ O . S	79	K ₃	. 00
LOOP HEIGHT (ABOVE:	1,000 SURFACE -	() (./ft.)	TRI	POD	HELI	COPTER	<i>X</i>
TYPE OF MEAS	SUREMENT: H	ELICOPTER CA	AL	BENCHMAR	К	ROUTIN	E <u>X</u> 7
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)		M E D2	DIST.	AZ. OT.
1023	10.20	24.7	105				
1022	13.60	34,5					
1021	11.1/3	27.4					
1020	11.05	27.0					
1018	F _t 12.30	30,2					
1029	10.20	24.5					
1028	13.60	34,3					
1026	11-1/3	27.4					
1027	11.05	27.0					
1024	F _t 12.30	29.7					
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT LOOP TOWARD THE STATION.

* HEIGHT- GAIN MEASURE MENT.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	s	ITE NO	DATE	: 19 A	UG 19	778
1 _{as} 400	2 A. K	0.9	8 1	(2 <u>0</u> .	99	K ₃	. <u>DD</u>
LOOP HEIGHT (ABOVE:	2,000 SURFACE -	()(./ft.)	TRIF	POD	HELI	COPTER _	X
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	K	ROUTIN	E X #
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. ot.
1040	10.20	25.5	110				
1039	13.60	35.2					
1038	11.1/3	28.5					
1037	11.05	27.8					
1	F _t 12.30	31.3					
	10.00	261			1	1	
1045	10.20	25.6				 	
1043	13.60	35.5				-	
1043	11-1/3	28.3				ļ	
1042	11.05	27.9				ļ	
1042	F _t 12.30	30,6					
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT LOOP TOWARD THE STATION. + HEIGHT-GAIN MEASUREMENT.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S:	ITE NO	DATE	: 19 A	UG 19	78
Ias 400	2 A. K	0.98	<u> </u>	K ₂ <u>0</u> .	99	K ₃ /	. <u>00</u>
LOOP HEIGHT (ABOVE:	3,000	() (ft.)	TRI	POD	HELIC	COPTER _	<u> </u>
TYPE OF MEA	SUREMENT: HE	ELICOPTER CA	AL	BENCHMAR	к	ROUTIN	X.*
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1055	10.20	26.1	105				
1054	13.60	35.5					
1053	11.1/3	29.5				<u> </u>	
1052	11.05	28.4				<u> </u>	
1051	F _t 12.30	31.3					
1102	10.20	25.8					
1101	13.60	35.5					
1059	11-1/3	29.1					
1058	11.05	28.4					
1056	F _t 12.30	31.4					
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT LOOP TOWARD THE STATION. + HEIGHT-GAIN MEASUREMENT.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO	CATE	: 19 A	UG 19	78
Ias 400	<u>)</u> A. K	<u> 0 · 98</u>	8	x ₂ _ <u>0</u> . <u>9</u>	79	K ₃	. 00
LOOP HEIGHT (ABOVE:	4,000 SURFACE -	(X:/ft.)	TRI	POD	HELI	COPTER _	X
TYPE OF MEA	SUREMENT: H	ELICOPTER CA	AL	BENCHMAR	Κ	ROUTIN	E X *
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D 1	M E D2	DIST.	AZ. OT.
1110	10.20	26.4	110				
1109	13.60	35.8					
1108	11.1/3	29.1				<u> </u>	
1107	11.05	28.7					
1106	F _t 12.30	31.5					
1114	10.20	26.4					
1113	13.60	36.2					
1/12	11-1/3	29.1					
1111	11.05	28.5					
////	F _t 12.30	31.6					
	10.20						
	13.60	_					
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT LOOP TOWARD THE STATION.

* HEIGHT- GAIN MEASUREMENT.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	\$	ITE NO	DATE	: 19 /	709/	978
1 _{as} 400	ON: <u>REUNION</u> A. K	<u>. 0.9</u>	8	K ₂ <u>O</u> .	79	K ₃	. 00
LOOP HEIGHT (ABOVE:	5,000 SURFACE -) (m./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	<u> </u>
TYPE OF MEA	SUREMENT: HI		AL	BENCHMAR	К	ROUTIN	E X *
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
	10.20		105				
	13.60						
	11.1/3						
	11.05						
1454	F _t 12.30	32.3					
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						
	10.00					1	
	10.20					 	
	13.60				·	}	
	11-1/3					 	
	11.05					 	
	F _t 12.30						

COMMENT LOOP TOWARD THE STATION.

** HEIGHT-GAIN MEASUREMENT.

ABORTED - CLOUDS UNDER THE HELD.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO. 2	DATE	: <u>19 A</u>	06 1	978
1 _{as} 400	<u>)</u> A. K	0.98	2	² _0.9	79	K ₃	.00
LOOP HEIGHT (ABOVE:	3000 SURFACE -	(x(/ft.)	TRI	POD	HELI	COPTER _	_X
TYPE OF MEA	SUREMENT: HI		AL	BENCHMAR	К	ROUTIN	E X *
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1509	10.20	36.6	105				
1508	13.60	47.6					
1507	11.1/3	39./					
1506	11.05	38.6					
1504	F _t 12.30	45.3				<u> </u>	
1516	10.20	36.6					
1515	13.60	48.8				<u> </u>	
1514	11-1/3	40.4				ļ	
1513	11.05	39.6				_	
1510	F _t 12.30	45.0					
1521	10.20	36.9					
1520	13.60	48.7					
15/9	11-1/3	40.9					
1518	11.05	40.1					
1518 1517	F _t 12.30	40.1					

LOOP TOWARD THE STATION.

COMMENT * HEIGHT-GAIN MEASUREMENT.

NO HIGHER ALT. POSSIBLE DUE TO WIND.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATIO	ON: REUNION	\$1	ITE NO	DATE	: 19 A	UG /	778
	<u>)</u> A. K						
LOOP HEIGHT (ABOVE:	2000 SURFACE -	(x ./ft.)	TRI	POD	HELI	COPTER	<u>X</u>
TYPE OF MEAS	SUREMENT: HE		AL	BENCHMAR	K	ROUTIN	X *
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1536	10.20	48.5	107			ļ	
1535	13,60	60.4					
1533	11.1/3	52.4		L		ļ	
1533	11.05	51.0				ļ	
1532	F _t 12.30	57.6					
1542	10.20	47.4					
1541	13.60	60.5					
1540	11-1/3	52.3			ļ 	 	
1539	11.05	50.6					
1538	F _t 12.30	56.6					
#	10.20						
# #	13.60						
1546	11-1/3	54.1					
	11.05	49.8					
1545 1544	F _t 12.30	57.5	STOT/				

LOOP TOWARD STATION.

COMMENT * HEIGHT - GAIN MEASURE MENT.

NO HIGHER ALT. POSSIBLE DUE TO WIND.

ABORTED FLIGHT - FUEL FILTER & NO SPARE.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	<u> </u>	ITE NO	DATE	: 20 H	06 19	78
1 _{as} 400	_ A. K	0.9	8	K ₂ _ O · S	99	K ₃	. <u>00</u>
	5,000						
TYPE OF MEA	SUREMENT: H	ELICOPTER CA	AL	BENCHMAR	К	ROUTIN	E X 3
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. ot.
0857	10.20	27.1	105				
0856	13.60	36.7				<u> </u>	
0855	11.1/3	29.3				<u> </u>	
0854	11.05	29.1					
0851	F _t 12.30	33.2					
	10.20						
	13.60			_			
	11-1/3						
	11.05						
	F _t 12.30						
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT LOOP TOWARD THE STATION.

* HEIGHT-GAIN MEASUREMENT.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO	<u>/</u> DATE	: 20 A	UG 19	78
	<u> </u>						
LOOP HEIGHT (ABOVE:	6,000	O (M./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	_X
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	К	ROUTIN	E X *
TIME (LOCAL)	FREQUENCY (kHz)	E _g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. ot.
0905	10.20	28.1	105				
0904	13.60	37.1					
0903	11.1/3	29.5					
0902	11.05	29.7					
0901	F _t 12.30	33.8					
	10.20						
	13.60					<u> </u>	
	11-1/3						
	11.05						
	F _t 12.30						
	10.20						
	13.60					<u> </u>	
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT LOOP TOWARD THE STATION. * HEIGHT-GAIN MEASUREMENT.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO	DATE	: <u>20 A</u>	UG 19	78
	<u>2</u> A. K						
LOOP HEIGHT (ABOVE:	7,000	(AY./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	<u>X</u>
TYPE OF MEA	SUREMENT: HI	ELICOPTER CA	AL	BENCHMAR	К	ROUTIN	E X_#
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
0914	10.20	28.7	105				
0913	13.60	37.7			_	<u> </u>	
0911	11.1/3	30,1				ļ	
0910	11.05	29.6					
0909		34.1					
	10.20						
	13.60						
	11-1/3				!		
	11.05						
	F _t 12.30						
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT LOOP TOWARD THE STATION.

** LAST OF HEIGHT-GAIN MEASUREMENTS.

**TOO MUCH WIND. NOISEY SIGNALS.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO.	, DATE	: 20 A	06 19	778
1 _{as} 400	<u>)</u> А. к	0.9	8	K ₂ <u>O</u> .	99	K ₃	.00
LOOP HEIGHT (ABOVE:	7,000	O (₩./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	<u>×</u>
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	K	ROUTIN	E <u>X</u>
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
0926	10.20	37,9	105				
0925	13.60	.51.1					
0924	11.1/3	42,5				ļ	
0923	11.05	42.2		<u> </u>			
0921	F _t 12.30	47.6					
0932	10.20	38,9			,	1	
	13.60	51.5				1	
0931	11-1/3	43.2					
0929	11.05	42.4			<u> </u>	 	
0928		48,5					
00.00	10.20	20.4					
0942	13.60	39.4				 	
0940	11-1/3	<i>51.4 42.8</i>					
0931		42.1					
0936	F _t 12.30	47.6					

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO &	DATE	: 20 A	106 /	978
1 _{as} 400	_ A. K	0.98	2	K ₂ _ <i>Q</i> . 9	79	K ₃	. <u>00</u>
LOOP HEIGHT (ABOVE:	7,000	(M./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	_X
TYPE OF MEA	SUREMENT: HI		AL	BENCHMAR	к	ROUTIN	E X
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. ot.
0956	10.20	50,9	120	- 			
0955	13.60	45,8					
0954	11.1/3	55.6				ļ	
0952	11.05	55.6					
0951	F _t 12.30	61.6					
1000	10.20	51.1					
1000	13.60	66.3					
0959		55.8					
0958		54.5				_	
0957	F _t 12.30	60.9					
1006	10.20	51.2					
1005	13.60	66.4					
1004	11-1/3	5517		!			
1003	11.05	54.9					
1003	F _t 12.30	61.8					

RADIO FIELD INTENSITY MEASUREMENTS

ON: REUNION	S	ITE NO. <u>3</u>	DATE	: 20 F	UG 19	18
<u> </u>	0.98	7	x ₂ _ <u>0</u>	99	K ₃	. <u>00</u>
7,000	(K./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	X
SUREMENT: H		AL	BENCHMAR	.к	ROUTINE	<u> X</u>
FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
10.20	49.4	150				
13.60	66.6					
11.1/3	53.7					
11.05	51.5					
F _t 12.30	60,5					
10.20	48,7					
13.60	65.8		···			
11-1/3	54.0					
11.05	52.7					
F _t 12.30	60.5					
10.20						
13.60						
11-1/3						
11.05						
F _t 12.30						
	P. A. K 7,000 SUREMENT: H FREQUENCY (kHz) 10.20 13.60 11.1/3 11.05 Ft 12.30 10.20 13.60 11-1/3 11.05 Ft 12.30	$\frac{7,000}{7,000}$ (K/ft.) SUREMENT: HELICOPTER C. FREQUENCY (kHz) $\frac{E}{(mV)}$ $\frac{10.20}{13.60}$ (66.6 $\frac{11.1/3}{53.7}$ $\frac{51.05}{10.20}$ (87.7 $\frac{11.05}{57.5}$ Ft 12.30 $\frac{48.7}{60.5}$ $\frac{11.1/3}{54.0}$ $\frac{54.0}{11.05}$ Ft 12.30 $\frac{60.5}{11.05}$ $\frac{52.7}{11.05}$ Ft 12.30 $\frac{11.05}{52.7}$	7,000 (M/ft.) TRIL SUREMENT: HELICOPTER CAL. FREQUENCY (kHz) (mV) HEADING (Mag.) 10.20 49.4 /50 13.60 66.6 11.1/3 53.7 11.05 5/.5 Ft 12.30 60.5 10.20 48.7 13.60 65.8 11-1/3 54.0 11.05 52.7 Ft 12.30 60.5	A. K	A. K O 98	FREQUENCY (kHz) (mV) (Mag.) D1 D M E D2 DIST. 10.20 49.4 /50 13.60 66.6 11.1/3 53.7 11.05 5/.5 Ft 12.30 60.5 11-1/3 54.0 11.05 52.7 Ft 12.30 60.5 10.20 13.60 11-1/3 11.05

COMMENT LOOP AWAY FROM THE STATION.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA JTATI	ON: REUNION	S	ITE NO. 4	DATE	: 20 F	7 UG 1	778
1 as 400	<u> </u>	0.98	<u>~</u>	x ₂ _ <u>o</u> · _	99	K ₃	. 00
LOOP HEIGHT (ABOVE:	7,000	SEA LEVEL)	TR1	POD	HELI	COPTER _	<u>X</u>
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	К	ROUTIN	<u> </u>
TIME (LOCAL)	FREQUENCY (kHz)	E _g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. ot.
1114	10.20	39.6	160				
1114	13.60	51.7					
1/13	11.1/3	43.5					
1112	11.05	42.6					
1111	F _t 12.30	48.6					
1119	10.20	39.7					
1118	13.60	50.9				ļ	
1//7	11-1/3	42.3				ļ	
1116	11.05	42.4					
1115	F _t 12.30	48.1					
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT LOOP AWAY FROM THE STATION.

RADIO FIELD INTENSITY MEASUREMENTS

UMEGA STATI	ON: KEINION	<u> </u>	<u>کے .</u> ITE NO	DATE	: 20	AUG.	1978
1 _{as} 400	<u> 2</u> A. K	0.98	<u>P</u>	K ₂ _ Q	99	K ₃	.00
LOOP HEIGHT	7,000	(MC/ft.)	TRI	POD	HELI	COPTER	<u>X</u>
							_
TIPE OF MEA	SUREMENT: H		AL	BENCHMAR	K	RUUTIN	<u> </u>
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
1129	10.20	32,5					
1127	13.60	42.7					
1126	11.1/3	35.5				<u> </u>	
1125	11.05	35.2				<u> </u>	
11.25	F _t 12.30	40.2			<u> </u>		
					1	-	
1/35	10.20	32.7					
1133	13.60	42.8				<u> </u>	
1132	11-1/3	34.7					
1131	11.05	34.7					
1130	F _t 12.30	39.9					
	10.20					1	
	13.60						
	11-1/3						
	11.05					1	-
	F _t 12.30						
					•	-	•

COMMENT LOOP AWAY FIROM THE STATION.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO. 9	${\cal B}$ DATE	: 22 /	406 1	978
	2 A. K						· <u> </u>
LOOP HEIGHT	SURFACE -	()(./ft.)	TRI	POD X	HELI	ICOPTER _	
	SUREMENT: H						E
TIME (LOCAL)	FREQUENCY (kHz)	E _g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
1038	10.20	31.2	279				
1036	13.60	40.0					
1035	11.1/3	33.2			<u> </u>	<u> </u>	
1032	11.05	32.9					
/033	F _t 12.30	37.2					
<u> </u>	10.20				1	1	<u> </u>
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						
<u> </u>					1		
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

COMMENT

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON. <u>REUNION</u>	S	ITE NO. <u>9</u> .	<u>A</u> DATE	: 22 A	UG 19	78
	<u> </u>						
LOOP HEIGHT (ABOVE:	SURFACE -	(K/ft.)	TRI	PODX	HELI	COPTER _	
TYPE OF MEA	SUREMENT: H	ELICOPTER C	AL	BENCHMAR	K <u>X</u>	ROUTIN	Ε
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1047	10.20	31.4				<u></u>	
1046	13.60	40.1					
1045	11.1/3	33.1					
1043	11.05	32,9		· · · · · · · · · · · · · · · · · · ·			
1041	F _t 12.30	37.3					
1/22	10.20	31.7					
1127	13.60	40.6					
1128	11-1/3	32.7					
1130	11.05	33.0					
1132	F _t 12.30	37.0					
1143	10.20	31.5			<u> </u>	1	
1140	13.60	40.3					
1138	11-1/3	33.2					
1136	11.05	32,3					
1136 1134	F _t 12.30	37.0					

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S	ITE NO. <u>9</u>	<u>C</u> DATE	: 22 A	VG 19	978
1 as 400	ON: <u>REUNION</u>	0.98	2	κ ₂ <u>D</u> .	99	K ₃	
	SURFACE -						
	SUREMENT: H	·					
TIME	FREQUENCY	Ea	HEADING	D	M E	DIST.	AZ.
(LOCAL)	ļ 		(Mag.)	D1	D2	km.	οт.
1100	10.20	31.0	279				
	13.60	39.9					
	11.1/3	32.7					
	11.05	33.5		-			
1055	F _t 12.30	34.7					
					T		····
	10.20				 	ļ	
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						
·					· · · · · · · · · · · · · · · · · · ·	1	
	10.20					<u> </u>	
	13.60					<u></u>	
	11-1/3						
	11.05						
	F _t 12.30						

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	s	ITE NO. 9	$ ot\!$: 22 /	9UG 1	978
1 _{as} 400	ON: REUNION	0.9	8	x ₂ <u>0</u> .	79	К ₃	· <u> </u>
LOOP HEIGHT (ABOVE:	SURFACE -	()x/ft.)	TRI	POD X	HELI	COPTER _	
TYPE OF MEA	SUREMENT: H	ELICOPTER CA	AL	BENCHMAR	к <u>Х</u>	ROUTIN	
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. ot.
1113	10.20	30,9					
////	13.60	39.9					
1110	11.1/3	32.7					
1109	11.05	32.8					
1107	F _t 12.30	32.8 34.7					
	10.00						
	10.20			· · · · · · · · · · · · · · · · · · ·		 	
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						
							
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 12.30						

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: REUNION	S:	ITE NO. <u>/</u>	<u>O</u> DATE	. 22 A	UG 19	78							
I 400	2 A. K	0.9	<u>8</u>	K ₂ <u>D</u> .	99	K ₃	· <u> </u>							
LOOP HEIGHT	SURFACE -	(MC/ft.)	TRI	POD X	HELI	COPTER _	· · ·							
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	K 🗻	ROUTIN	E							
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D1	M E D2	DIST. km.	AZ. OT.							
1611	10.20	23.7	277											
1608 13.60 32.2														
1608 13.60 32.2														
1604	11.05	25.2												
1601	F _t 12.30	29.0												
1, 20	10.20	22-				1								
1622		23,5				- 								
1620	13.60	32.1												
1619	11-1/3	25.4												
1616	11.05	25.3												
	F _t 12.30	29.1												
11.24	10.00	021			,	1								
1634	10.20	23.5			 									
1632	13.60	32,/												
1629	11-1/3	25.3												
1627	11.05	25.2												
1629 1627 1625	F _t 12.30	29.2												

			HEL	I COPT	CER (CAL.			_•	В	NCH	1 ARK			- F	ITUO9	NE _	X		
86					4		3	2		\.	.9		N	4		-	5		-	
16 /8		ctor	Erd/Ia (Units)	1.932	1.994		2,64	2.57		2,056	2.12		2,062	2.104		2,450	2.455			
DATE: 9 AUG 1978	1.01	Vehicle Factor	Rr (Ohm)	0.0414 1.930	1560.0442		1550,0776 2.643	151 0.0735 2.572		1440.0470	149 0,0502 2.126		0.0472	1520,0492		158 0.0667	159 0,0670			
0	بر "		h (m)	151	156		155	151		144	149		/48	152		85/	651			
T	0.99	Loop Factor	Pr (KW)	6,4	8.9		6.11	11.3		7.2	2.7		2.3	2.6		10.2	10.3			
JMBER:	K ₂ =		Er (mV/m)	26.9	22.9		37.0	36.0		28.7	29.8		28.8	29.4		34.2	34.0			
SITE NUMBER:	0.98	I _a /I _{as}	Ε _Μ (mV/m)	27.3	28.3		37.3	36.3		29.0	30.1		29.1	29.7		34.5	34.7			
	K1 =	ł	I _A (A)	368																
REUNION	.	}	Eg (mV)	27.3	28.3		37.3	36.3		29.0	30.1		1.62	29.7		34.5	34.7			
1	•		(A)	400																
OMEGA STATION:	nce:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
OPEGA	Distance:	(1f c	Dist. (km.)	1.8:	0.8	•	0.82	0.8		1.82	0.83		1.82	1.83	•	1.82	18.0			•

		HEL	I COP	TER	CAL.	_		 •	В	ENCH	MARK			_	ROUTI	NE _		<u> </u>	
8661	1	Erd/Ia (Units)	446	151		885	848		890	101		073	200		395	104	<u> </u>		
Aug	7 / Factor	 	51/03	3/.9		42.	1.2.		52.0	0 2.		72.1	82,		72.	2.		_	
DATE: 7 AUG 1978	/, O / Vehicle Factor	(Ohm)	152 0,0420 1,944	1520.04231.951		151 0.0744 2.588	149 0.0721 2.548		1450.0475 2.068	1480,0490 2.101		1490.0417 2.073	1450.0448 2.007		155 0,0637 2,395	1550,0641 2.401			
_ 	ا ش	E E	1			151	149		145	148		149	145		/55	155			
AK	- 0,99 Loop Factor	Pr (KW)	6,5			11.4	_		7.3	7.5		7.3	6.9		8.6	8.6			
SITE NUMBER:	^K 2 = C	Er (mV/m)	31.9		-	42.9 42.4	42.6 42.1		34.1	34.8		34.1	33,1		39.3	39.4			
SITE N	0.98 1 _a /1 _{as}	(mV/m)	32,5	32.9		42.9	42.6		34.6	35.3		34.7	33.6		39.8	39.9			
	K1 =	-FE	392																
REUNION	5	Eg (mV)	32.5	32.9		42.9	42.6		34.6	35.3		34.7	33.6		39.8	39.9			
1	.! -	18 (A)	400																
OPEGA STATION:	Distance: (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
5	Dist. (If	Dist. (km.)	23.9	33.7		23.9	23.7		3.8	23.2		8.82	23.8		23.9	3.9	•		•

		HEL	I COPT	TER C	AL.			_•	В	ENCH	ARK			_ 1	ROUTI	NE _	X		
28									L			\ 			!				,
106 19	ctor	Erd/Ia (Units)	1.927	1.928		2.543	2.548		2.149	2.103		2.026	2.041		2.365	2.353		,	
DATE: 9 AUG 1978	/, 0 / Vehicle Factor	Rr (Ohm)	0,04/3	150 0.0413 1.928		149 0,0719	149 0,0722 2.548	:	151 00513	1480.0492		146 0,0456	1470,0463		1530.0621	1520,0615			
2	بر "	P _E	150	251		651	149		151	/48		146	147		851	152			
A3	0, 99 Loop Factor	Pr (kW)	6.3	6.3		0.//	11.1		2.9	7.6		7.0	2.1		56	9.5			
JMBER:	^K 2 = 100	(mV/m)	322	37.4		49.4	49.5		41.7	40.8		39.3	39.6		45.7	45.7			
SITE NUMBER:	0,98 Ia/Ias	(mV/m)	38.2	38,4		50.1	50.2		42.6	41.7		40.2	40.5		46.5	46.5			
	7. H	1 (A)	392																
REUNION	<u>5</u>	Eq (mV)	38.2	38,4		50.1	50.8		42,6	41.7		40.2	40,5		46.5	46.5			
}	 	I as (A)	400																
OMEGA STATION:	Distance: (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
OPEGA	Distance: (If const	Dist. (km.)	20.3	20.2	•	20.2	20.2	•	20.2	20.2		20.2	202	•	20.3	20.2	•		•

			HEL	I COP	TER (CAL.	_		_•	В	NCHI	MARK			_	ROUTI	NE _	$\underline{\hspace{0.1cm}}^{\hspace{0.1cm} \hspace{0.1cm} 0.1c$	<u></u>	
28						4	ı			L			l			L			.	•
9 Aug 1978		ctor	Erd/Ia (Units)	1.834	1.850		2.491	2,500		2.051	2.052		5661	6861		2.264	2.243			
DATE: 9 /	1.01	Vehicle Factor	Rr (Ohm)	1430.0374	1440,0380		1460,0689 2.49	1460,0694 2,500		144 0,0467	1440.0468		14400442	1430,0440 1,989		1460,0569	1450,0559			
0	₅ =		he (m)	143	144		951	146		144	144		144	143		951	551			
44	0.66	Factor	Pr (kW)	5.7	5.8		10,6	10.7		2.2	7.2		8.9	6.8		6'8	9.8			
	K ₂ = &	7	Er (mV/m)	43.8	44.5		59.2	60,1		18.7	49.6		424	47.8		53,5	53,6			
SITE NUMBER:	0.98 K3=	la/Ias	Ε _η (mV/m)	45.6	46.3		5.09	61.5		50,3	51.3		49.0	49.5		54.9	55,1			
	K ₁ μ	l	IA)	392																
REUNION	ka.,	}	Eg (mV)	45.6	46.3		60.5	61.5		50.3	51.3		49.0	49.5		54.9	55,1			
J	•	1	Ias (A)	900																
OMEGA STATION:	nce:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
OMEGA	Distance:	(1f c	Dist. (km.)	6.4	6.3	•	6.5	6.3	•	6.5	6.2	٠	5.9	6.3	•	4.9	4.9	•		•

^			HEL	I COPT	rer (CAL.			_·	BE	NCHI	MARK		-	_	ROUTI	NE _	<u> </u>	
10 AUG 1978		tor	Erd/Ia (Units)	2.071	2.135		2.831	2.890		2,269	2.331		2.178	2.246		2.580	2,593		
DATE: 10,	1.01	Vemcle Factor	Rr (Ohm)	162 0.0476 2.071	1670,05062,135		166,0,0891 2.831	1690.0928		1590.0572	1640.0604		1570,0527 2.178	162 0,0560		167 0.0 739	168 0.0747		
٥	₇ =		h (m)	162	162	•	791	169		159	164		157	162		191	89/		
\mathcal{B}	0.89	p Factor	Pr (kW)	2.3	8.6		13.7	14.3		8.8	9.3		1.8	9.8		11.4	11.5		
JMBER:	K2 = C	007	Er (mV/m)	30,0	30,6		41.0	41.7		32.7	33.6		31.5	32.5		37.3	37.5		
SITE NUMBER:	0.98	_	Em (mV/m)	30,4	31.1		41.3	42.0		33.1	34,0		31.9	32.9		39.7	37.9		
	"	I	LA A	392															
REUNION	Ē.		Eg (mV)	30,4	3/./		41.3	42.0		33.1	34.0		31.9	32.9		39.7	37.9		
1	•		I Ses	400															
OMEGA STATION:	ice:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30			
OMEGA	Distance:	(1f c	Dist. (km.)	1.62	27.3	•	1.62	27.2		27.2	27.2		29.1	1.62	•	1.62	27.1	•	

_			REUNION Par.	K ₁ = _C	SITE NUMBER: $0.98 \text{ k}_2 = 1.11 \text{ k}_2 = 1.11 \text{ k}_2 = 1.11 \text{ k}_2 = 1.11 \text{ k}_3 = 1.11 \text$	JABER:	0,99	K ₃	DATE: 10 40	9	806/
(if constant) st. Freq. Las Eq. La	Eg Ia	I	"		a' tas	Er Er	Pr.		Venicie ra	Erd/Ia	
(A) (mV) (A) (A) (A)	(mV) (A) 35.5 392	(mV) (A) 35.5 392		$- \mid \omega$	(mV/m) 35,5	(mV/m) 34,8	(KW)	1 .	(0hm) 0,049/	(Units) 2,059	HELICOP
35.5	35.5	35.5		W	35.5	34.8	2.4	163	163 0.0484	7.087	TER (
											CAL.
13.60 48.7	.7	.7	7	יי	48.7	48.2	14.0	167	1670,0910	2.862	
6.86	8	8	6	7	48.8	48.3	14.3	691	169 0,0930 2,893	2.893	
											_• _
11-1/3 39.5 39			36	39	39.5	38.9	9.1	291	162 0.0593	2.310	BE
39.2 3	7	7	3	3	39.2	38.6	9.1	162	1620,0589	2.303	NCHI
											1 ARK
11.05 38,3 3,	3	3	3	W	38.3	326	8.5	09/	160 0.0 552	2.228	
38.3 3	,3	,3	3	W	38.3	32.7	8,6	162	1620.0562	2.248	
											_ !
12.30 44.0 4.4	0:	0:	4	4	44.0	43,4	11.5	89/	168 0.0746	2.591	ROUTI
44.6			4	4	44.6	44.0	11.7	69/	169 0,0 760	1 !	NE _
											×

۸		HELI	COPT	ER C	AL.			.•	BE	NCHM	ARK			R	11TU0	E_	<u>X</u>	
9/6					•			4			4							
10 AUG 1978	tor	Erd/Ia (Units)	2,067	2.076		2.894	816.2		2.302	2.332		2.251	2.275		2.555	2.604		
DATE: 10	/, O/ Vehicle Factor	Rr (Ohm)	0,0475 2.067	1620.0479 2.076		1690.0930	171 0.0946 2.918		162 0.0589	164 0.0604		1620.0563	164 0.0575		1650.0725	168 0.0754		
5	ж 3 "	h (m)	191	162		691	121		162	164		162	164		165	89/		
BZ	0.99 Loop Factor	Pr (kW)	23	2,4		14.3	14.5		9.0	9.3		9.8	8.8		11.1	9///		
	K ₂ =	Er (mV/m)	41.3	41.5		625	58.4		46.0	46.6		45.0	45,5		1719	52.1		
SITE NUMBER:	198	(mV/m)	42,5	42.7		8'85	59.3		47.1	49.7		46.1	46,6		52.1	53.1		
	$K_1 = \frac{O}{I_a}$	[A]	392															
REUNION	.	Eg (mV)	42.5	42.7		8'85	59.3		124	47.7		1.95	46.6		52.1	53.1		
- 1		Igs (A)	400															
OMEGA STATION:	Distance: (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30			
OMEGA	Distance: (If const	Dist. (km.)	9.6	19.6		7.61	19.6	•	19.61	19.6	•	9.61	9.61	•	19.6	19.6	•	•

			HEL	I COP	TER (CAL.			_ ·	BI	ENCH	MARK			_	ROUTI	NE _	X	, 	
866																•				
909 19		tor	Erd/Ia (Units)	2.097	2.086	2.086	2.921	2.916	2.942	2.314	2.363	2.372	2.250	2.294	2.288	2.575	2.618	2.647		
DATE: 10 AUG 1978	1.01	Vehicle Factor	Rr (Ohm)	164 0.0489	1630,0484	1630.0483	1710,0948	1710.0945	172 0.0962	162 0,0595	166 0.0620	167 0.0625	162 0.0563	1650.0585	1650,0582	167 0.0737 2.575	169 0.0762	96600 161		
ة ا	بر #		h (m)	164	163	163	121	171	172	162	77/	167	77/	165	165	691	691	141		
84	0,99	Loop Factor	Pr (kW)	2.5	7.4	7.4	14.6	14.5	14.8	9.1	9.5	9.6	8.6	9.0	8.9	11.3	11.7	12.0		
UMBER:	K ₂ = C		Er (mV/m)	53.7	53.4	53.1	74.8	75.2	74.4	59.3	60,5	60.4	57.3	59.2	58.2	65.5	67.5	67.4		
SITE NUMBER:	86'0	la/Ias	Ε _Μ (mV/m)	56.2	55.9	55.5	26.8	77.2	76.3	61.5	62.8	62,6	59.5	61.5	60,5	979	69.7	69.5		
	K1 = 6	•	IA)	392																
REUNION	Ĕ.	ļ	Eg (mV)	56.2	55.9	55.5	8.9%	77.2	76.3	61.5	62.8	62.6	59.5	61.5	60.5	67.6	69.7	69.5		
1		!	Igs (A)	400																
OMEGA STATION:	ince:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
OMEG/	Distance:	(1f (Dist. (km.)	5.3	5.3	5.4	5.3	15.2	5.5	5.3	5.3	5.4	5.4	5.2	5.4	15.4	5.2	5.4		٠

				R CAL.						I ARK	-, .			0UT 11	NE	X		
φ		No	DA7	A.	77	24	NS	PO	NO) E 18	2 6	00	7	0,6	: -			
9		Pos/	TIO	v. &	Be	41	ND_{i}	4	61	30)	/E	OF	77	REE	ES.			. ~
DATE: 10 AUG 1978		1								Ì								
2	1.	Erd/Ia (Units)				}	}		}	1		}						
4	ctor	<u> </u>																
0	Vehicle Factor									I								
7	101	9.0 P.							İ	Ì	}	- 1						
TE:	Veh									1								
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}	~	ے ،																
7	Loop Factor	(K.X.)											l					
	0 F												[
	05	<u> </u>											ı					
 %	"	Er (mV/m)																
9	×2			_														
SITE NUMBER:	-	(m)		}								}						
SI	la/las	Em (mV/m)																
1	la/							-			-				_			{
	ļ H	LAA	}															
	2															,		
	<i>:</i>																	
3	. 5	Eg (mV)																
PE JA TON															m. = .			
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 Æ		 	-		 													
OFEGA STATION:	Distance: (If constant)	Freq. (KHZ)	10.20		13.60			11-1/3			11.05			2.30				
25	Distance: (If const	EB	=					11						12				
3	ista If c	÷-:																
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\sim			HEL	I COPT	TER C	AL.			_•	88	ENCH	1ARK		~- —	_	ROUTI	NE _	<u>×</u>	, ,	
AUG 1978		20.	Erd/Ia (Units)	2.076	2.097		2.894	2.862		2.301	2.336		2.250	2.222	-	2.612	2.604	_		
DATE: 10 /	1.01	Vehicle Factor	Rr (Ohm)	162 0.0479	1640.0489		169 0.0930 2.894	1670.0910 2.862		1620.0588	164 0,0606		1620,0562	1600,0548		85600691	168 0,0754			*
8	بر ۱۱		he (m)	162	164		691	167		162	164		162	160		691	89/			
7	66'0	5 Factor	Pr (KW)	7.4	7.5		14.3	14.0		9.0	9.3		9'8	8,4		11.7	9.//			
JMBER:	K ₂ = 0		Er (mV/m)	32.8	33.0		45.7	45.0		36.4	36.8		35.6	35.0		41.3	41.0			
SITE NUMBER:	86.0	1	Εm (mV/m)	33.4	33.6		46.2	45.5		36.9	37.3		36.1	35.5		41.8	41.5			
	K] = (ĺ	1 (A)	392																
REUNION	. E	ļ	Eg (mV)	33.4392	33.6		46.2	45.5		36.9	37.3		36.1	35.5		41.8	41.5			
1	•		Igs (A)	400										-						
OMEGA STATION:	nce:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
OMEGA	Distance:	(1f c	Dist. (km.)	24.8	24.9	•	24.8	24.9		24.8	24.9	٠	24.8	24.9	•	8.42	24.9	٠	•	•

λ.			HEL	I COP	TER (CAL.			_·	BE	ENCHI	MARK		·	- 1	ROUTI	NE _	_×		
8/6													 						-	
AUG 1978		tor	Erd/Ia (Units)	2.101	2.075		3.031	2.958		2.35/	2.342		2.281	2.279		2.576	2,556			
DATE: 10 /	/.0/	Vehicle Factor	Rr (Ohm)	164 0.0490	0,0478		177 0,1020	173 0.0972		1650,0614	1640.0610		1640.0578	1640.0576		1670,0737 2.576	1650,0726			
PA	بر "		he (m)	164 1	162 (199	173		1654	164		164	1641		7/62	1591			
3	0.99	Loop Factor	Pr (kW)	2.5	2.4		15.7	14.9		9.4	4,6		6.8	6'8		11.3	11.2			
MBER: (K ₂ = 0		Er (mV/m)	40.0	39.5		58.0	56.3		45.0	44,6		42.8	43.5		1.84	48.6			
SITE NUMBER:	0.98	!	Em (mV/m)	41.0	40.5		8.85	52.1		45.9	45.5		43.7	44.5		48.9	49.5			
	K ₁ = _C	ľ	1 (A)	392																
REUNION	Ę.		Eg (mV)	41.0	40.5		58.8	57.1		45.9	45.5		43.7	44.5		6'8+	49.5			
1	•		Igs (A)	400																
OMEGA STATION:	nce:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
OMEGA	Distance:	(1 f c	Dist. (km.)	20.6	20.6	•	20.5	20.6		20.5	20.6	٠	20.9	20.5	•	21.0	20.6	•	٠	٠

~			HELI	COP1	TER C	CAL.	_		_•	BE	NCHM	1ARK			. F	:0UT11	NE _	$\overline{\times}$		
866						1			1	·T		1	•		·t		 1		 	
406 1978			Erd/Ia (Units)	2.119	2.097		2.954	2.921		2.369	3,3/3		2.333	2.307		2,597	2.608			
DATE: 10,	10/	renicie rac	Rr (Ohm)	1650.0499	164 0.0489		1730.0970	171 0.0948 2.92,		0.0623	162 0,0595		5090'0	1650.0371		168 0.0749	0,0755			
ă	, К З =		he (m)	1651	164		1736	12/6		77/	162	·	187/	166		789/	169/	·· ·		
7	66	ractor	Pr (KW)	9.7	7.5		14.9	14.6		9.6	9.1		8.3	9.1		11.5	11.6			
MBER:	K ₂ = 0	Loop	Er (mV/m)	25.0	54,4		77.2	76.3		6.19	60.5		4.19	59.9		623	67.7			
SITE NUMBER:	3.98	a/ tas	Em (mV/m)	57.6	57.0		79.3	78.4		64.3	62.8		63.9	62.3		70.1	66.67			
	K1 =	•	L(A)	392																
REUNION	E		Eg (mV)	57.4	57.0		79.3	78.4		64.3	62.8		63.9	62.3		70.1	63.9			
- 1	•		1 (Å)	400																
OMEGA STATION:	nce:	(If constant)	Freq. (kHz)	10.20			13.60	 		11-1/3			11.05			12.30				
OPEGA	Distance:	(If c	Dist. (km.)	2./	5.1		5.0	5.0		5.0	5.0		4.9	5.1	•	5.0	5.1	•	•	

			HEL	I COP1	TER (CAL.	_	-	_•		NCHI			<u>X</u> _	-	ROUTI	NE _			
Q										G	160	• 7	<i>A1</i>	ГР	OR	· 7			.	
BUG 1978		ctor	Erd/Ia (Units)	1.695	1.689	1.689	2.785	2.285	2.291	1.907	1.907	1.888	1.830	1.830	1.830	2.105	2.111	2.09%		
DATE: 16.		Vehicle Factor	Rr (Ohn:)	132 0.0319	132 0.0317	132 0,0317	134 0.0580	134 0,0580	1340.0583	0.0404	0.6404	1330,0396	132 0.0372	132 0,0372	132 0,0372	136 0.0 492	1370.0495	350.0486		
	ا س ا	,	h (m)	132	132	132	134	134	134	134	/34	133	132	132	132	136	137	135		
	65'0	p ractor	^р г (км)	4.9	4,9	4.9	6'8	6.8	9.0	7.9	6.2	1.9	4.5	5.7	5.7	9%	9%	7.5		
UMBER:	K ₂ =	007	Er (mV/m)	26.5	26,4	26.4	35.7	35.7	35.8	29.8	29.8	29.5	28.6	28.6	28.6	32.9	33.0	32.7		
SITE NUMBER:	0.98	la/ las	<i>Εη</i> (mV/m)	6.92	26.8	26.8	36,0	36.0	36.1	30.2	30,2	29.9	29.0	29.0	29.0	33,3	33.4	33.1		
	K1 =		(A)	388												- -				
REUNION	/ FM.,	:	Eg (mV)	27.2	22.1	22.1	36.4	36.4	36,5	30.5	30,5	30.2	29.3	29.3	29.3	33.6	33.7	33.4		
1	7		1 (Å)	204																
OMEGA STATION:	Distance: 2	(If constant)	Freq. (KHZ)	10.20			13.60			11-1/3			11.05			12.30				
OMEG	Dista	(1f ,	Dist. (km.)		•	•		•	•	•	•	•	•	•	•		•	•	•	

		HEL	I COP	TER (CAL.			_•		NCH!	ark Pee		X By	-	0UTI ~∕≤&	_	AN		
18 AUG 1978	tor	Erd/Ia (Units)	1.609	1.5%		2.229	2.247		1.756	1.775		1.742	1.761		1.952	1.946			
DATE: 18 A	Vehicle Factor	Rr (Ohm)	0.0288	0.0283		0.0551	131 0.0561		0.0342	0.0350		0.0337	1220.0344		0.0424	0.0421			
a 	ج ع "	e (E	126	125		a£/	131		/23	125		125	122		126	121	~		
	0.99 Loop Factor	Pr (KW)	4.4	4,4		8.5	3.8		5.3	5.4		5.2	5.3		6.5	6.5			
JMBER:	K ₂ =	Er (mV/m)	24.4	24.3		33.8	34.1		26.7	27.0		26.5	268		29.7	29.6			
SITE NUMBER:	0.98 Ia/Ias	Em (mV/m)	24.8	24.7		34.2	34,5		27.0	27.3		26.8	27.1		30.0	29.9			
	K1 = 6	I.A.	392																
REUNION	∞ ≅	Eq (mV)	25.1	24.9		34.5	34.8		27.3	27.6		27.1	27.4		303	30.2			
1	.'	Las (A)	400																
OMEGA STATION:	Distance: <u>25</u> (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
9 466	Dista (If c	Dist. (km.)	•	•	•	•	•		•	•		•		·		•	•	·	•

ď			HEL	(COP	TER (CAL.			-•		NCHN		 & D	X B	-	0UTII	_		
AUG 1979		tor	Erd/Ia (Units)	1.577	1.584		2.253	2.247		1.762	1841		1.748	1.754		1.952	1.946		
DATE: 18 1	1	Vehicle Factor	Rr (Ohm)	0.0276 1.577	124 0.0279		132 0.0564	0.0561		124 0.0345	125 0.0353		126 0.0339	126 0.0342		1260.0424	0.0 421		
<u>a</u>	بر ۳	•	e (iii	123	124		132	/3/		124	125		126	126		126	126		
	5.94	Loop Factor	Pr (KW)	4.2	4,3		6.7	9,6		5.3	5,4		5.2	5,3		6,5	6.5		
JMBER:	K ₂ = C		Er (mV/m)	24,0	24.1		34.2	34.1		26.8	22.1		26.6	26.7		29.7	29.6		
SITE NUMBER:	86'0	_	Em (mV/m)	24.4	24.5		34,6	34.5		22.1	27.4		26.9	27.0		30,0	29.9		
	K,=		(A)	392															
REUNION	Ę,	I	Eg (mV)	24.6	24.7		34.9	34.8		27.4	27.7		27.2	27.3		30.3	30.2		
j	8.8	ı	I.as (A)	400															
OMEGA STATION:	Distance: 25	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30			
OMEGA	Dista	(1f	Dist. (km.)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	٠	•

		HEL	I COP	TER (L .	6		_•	В	ENCH	4ARK	_		_ F	ROUTII	NE _	X		
8)				4	····		4	L						ļ	- -			
100 19	ctor	Erd/Ia (Units)	1.577	1.596		2.195	2.195		1.711	1.749		1.716	1.735		1.939	1.959			
DATE: 19 AUG 1978	/, O O Vehicle Factor	Rr (Ohm)	0.0276 1.577	125 0.0283		0.0535 2.195	0.0535		1200.0325 1.711	1230,0340		124 0,0327 1.716	1250.0335 1.735		125 0.0418	127 0.0426			
<u>a</u>	ж	a(m)	123	125		871	128		120	123		124	125		125	127			
	Loop Factor	Pr (kW)	4.2	4.4		8.2	8.2		5.0	5.2		2:5	5,1		6.4	6.6			
MBER:	$k_2 = \frac{C}{Loop}$	Er (mV/m)	24.0	24.3		33.4	33.4		26.0	26.6		26.1	26.4		29.5	29.8			
SITE NUMBER:	$\frac{O.98}{I_a/I_{as}} k_2 =$	Em (mV/m)	24.4	24.7		33.7	33.7		26.3	26.9		26.4	26.7 26.4		29.8	30.1			
	K1 =	LA (A)	392																
REUNION	Ø ₽	Eg (mV)	24.6	24.9		34.0	34.0		26.6	27.2		26.7	27.0		30.1	30.4			
1	ارم	LAS (A)	400																
OMEGA STATION:	Distance: $\frac{\mathcal{Z}}{(1f \text{ constant})}$	Freq. (kHz)	30.20			13.60			11-1/3			11.05			12.30				
OFFICE	Dista (If c	Dist. (km.)	•	•	•	•	•	•	•	•	•	٠	•	•	•		•		•

28		HEL	I COP	rer 🖠	M .	1,0	00	<u>.</u>	BE	NCHN	1 ARK			. F	OUTI	NE _	X	
DATE: 19 AUG 1978	tor	Erd/Ia (Units)	1.584	1.571		2.227	2.215		1.762	1.762		1.735	1.735		1.946	1.914		
VTE: 19	/, 00 Vehicle Factor	Rr (Ohm)	1240,0279 1.584	1230.0274 1.571		13000081	130 0,0545 2.215		124 0.0345	124 0.0345 1.762		0.0335	125 0.0335		126 0.0 421	124 0.0407		
a 	ج ش اا	h (m)	124	123		130	130		124	124		125	125		126	124		
,	99 Factor	Pr (KW)	4.3	4.2		8.5	8.4		5.3	5,3		2.1	5.1		6.5	6.3		
MBER:	$K_2 = \frac{O,99}{\text{Loop Factor}}$	Er (mV/m)	24.1	23.9		33.8	33.6		8.72	26.8		26.4	26.4		29.6	29.1		
SITE NUMBER:	0.98 Ia/Ias	Em (mV/m)	24.5	24.3		34.2	34.0		27.1	27.1		24.7	26.7		29.9	29.4		
	K ₁ = 1	I.A)	392															
REUNION	<i>©</i> ₽	Eg (mV)	24.7	24.5		34.5	34.3		27.4	27.4		27.0	27.0		30.2	29.7		
1	\ <u>\</u>	Igs (A)	400															
OMEGA STATION:	Distance: $\frac{Z}{(1f \text{ constant})}$	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30			
OPEG	Dista (If o	Dist. (km.)		•	•	•	•			٠				•	٠	•	•	

840		HEL	I COPT	TER (雌.	2,1	000	בְּ	BE	NCHM	IARK			. R	OUTI	NE _	X		
DATE: 19 AUG 1978	tor	Erd/la (Units)	1.635	1.641		2.273	2.292		1.833	1.820		1.787	1.793		2.017	1.972			
ITE: 19,	/. 0 0 Vehicle Factor	Rr (Ohm)	0.0297	128 0.0299		0,0574 2.273	134 0,0584 2, 292		2,0373	1280.0368		0.0355	129 0,0357 1.793		130 0.0452 2.017	128 0,0432 1.972			
8	ж 3 "	he (m)	87/	128		881	/34		671	128		621	129		130	128			
	0,99 Loop Factor	Pr (kW)	4.6	4.6		8.8	9.0		5.7	5.7		5.4	5.5		6.9	6.6			
MBER:	$K_2 = \frac{C}{Loop}$	Er (mV/m)	24.8	24.9		34.5	34.8		27.8	27.7		1.72	27.2		30.6	30.0			
SITE NUMBER:	, 98 a las	Em (mV/m)	25.2	25.3		34.8	35.1		28.7	28.0		27.5	27.6		31.0	30.3			
	^{ال} م ا	¹ (A)	392																
NION	€	Eg (mV)	25.5	25.6		35.2	35.5		28.5	28.3		27.8	27.9		31.3	30,6			
REUNION		1 (A)	400																
OMEGA STATION:	Distance: $\frac{25}{100}$	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
OPEGA	Dista (If c	Dist. (km.)		•			•			•	•	•	٠	•	•	•	•	•	٠

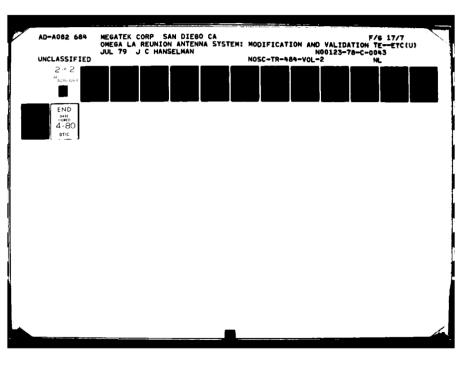
		HELI	COPT	rer •	难.	30	000	2.	BE	NCHM	IARK			R	:OUTI	NE _	X		
846					1		रू त				1			·{	1		1	 	
946 19	ctor	Erd/la (Units)	1.673	1.654		2.292	2.29%		1.897	1.871		1.825	1.825		2,017	2.023			
DATE: 19 AUG 1978	= / O O Vehicle Factor	Rr (Ohm)	131 0,0311	1290,0304 1.654		134 0,0584 2.292	134 0.0584 2.292		133 0,0400	131 0,0389		13100370	131 0.0370 1.825		130 0.0452	131 0,0455 2.023			
P	χ 3	h (m)	13/ 1	1291		134	1341		133 1	13/1		13/2	13/1		130	131 1			
/	Loop Factor	Pr (KW)	4.8	4.7		9.0	9.0		6.1	6.0		5.7	5.7		6.9	2.0			
MBER:	K ₂ =	Er (mV/m)	25.4	25.1		34.8	34.8		8.87	78.4		27.7	27.7		30.6	30.7			
SITE NUMBER:	0,98 1 _a /1 _{as}	Em (mV/m)	25.8	25.5		35.1	35./		29.2	28.8		7.87	28.1		31.0	31.1			
		I (A)	392																
REUNION	€	Eg (mV)	26.1	25.8		35.5	35.5		29.5	29.1		28.4	28,4		31.3	31.4			
- 1		I AS	400																
OMEGA STATION:	Distance: $\frac{25}{(1f \text{ constant})}$	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
OMEGA	Dista (If c	Dist. (km.)		٠		٠				٠	•	٠	•	•	•	•	•	•	

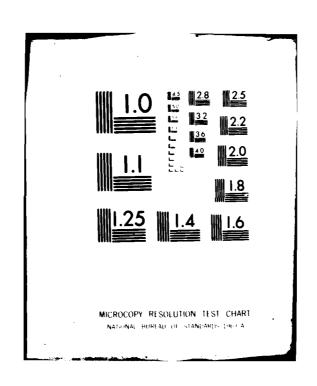
		HEL	COPT	ER 6	敞.	40	000	<u>)</u> .	BE	NCHM	IARK			. R	11700	NE _	X		
200																			
14 AUG 1978	ctor	Erd/la (Units)	1.693	1.693		2.311	2.337		1.871	1.871		1.844	1831		2.030	2,036			
DATE: 19	/, 00 Vehicle Factor	Rr (Ohn)	132 0.0318	132 0.0318		1350.0594	0,0607		1310.0389	131 0.0389		133 0,0378	132 20373		131 0,0458	32 0,0461			
a 	χ. ",	he (m)	132	132		135	137		131	/3/		133	132		131	132			
	0,99 Loop Factor	Pr (KW)	4.9	4.9		9.1	9.3		9,0	0.9		5.8	5.7		2.2	7.1			
IMBER:	$K_2 = \frac{O}{Loop}$	Er (mV/m)	25.7	25.7		35.1	35.5		28.4	28.4		28.0	27.8		30.8	30.9			
SITE NUMBER:	0,98 I _a /I _{as}	Em (mV/m)	26.1	26.1	•	35.4	35.8		8.82	28.8		28.4	28,2		31.2	31.3			
	K1 =	-I-A	392																
REUNION	<u>8</u>	Eg (mV)	26.4	26.4		8:58	36.2		1.67	29.1		28.7	28.5		3/.5	31.6			
١	00	I ASS	400																
OMEGA STATION:	Distance: 25 (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
OFFEA	Dista (If c	Dist. (km.)	•	•	•	•	٠		٠	٠	٠		٠	•		•	•	•	•

RADIO FIELD INTENSITY CALCULATIONS

HELICOPTER ML. 3,000. BENCHMARK ROUTINE X HEIGHT LIMITED BY WIND. DATE: 19 AUG 1978 135 0.0330 1.724 139 0,0515 2,153 135/0,0330/1,724 133 0.0573 2.270 136 00602 2.328 1360.0417 11.937 1.852 1,913 138 0.0508 2.139 48 1.738 137 0,0400 1.8 97 /, 00 Vehicle Factor 136 0,0336 134 0,0407 132 0.0370 135 0.0390 136 0.0600 130 0.0381 139 0,0513 e E 63 6.0 5.7 0,99 Loop Factor 6.4 9.3 6% 9.2 8,8 8:3 5.2 6.6 2 주(꽃 5.1 Er (mV/m) 39.1 38.7 47.4 35.2 36.2 35.2 35.5 47.5 39.6 38.2 44.0 46.4 44.6 43.7 3 37.8 43.9 SITE NUMBER: 37. ^K2 ≡ 0.98 1_a/1_{as} 36.2 39.8 44.8 40,5 39.7 (mV/m) 40.0 48.3 48.2 38.2 36.5 38.7 47.1 392 <u>.</u>€ 40.9 45.3 36.6 48.7 45,0 47.0 48.8 Ē 40.4 38.6 39.6 40,1 Eg () 45. 39. REUNION 400 Distance: 19 . (If constant) Tas (A) OMEGA STATION: 10.20 13.60 11-1/3 11.05 12.30 Freq. (KHZ) Dist. (km.)

		HEL	COPT	ER 🛭	àL.	2	000	2.	BE	NCHM	I ARK			_ R	OUT I	NE _	×	
8661		H E FLI	=1G GH			IM OR:	-			JY UE		IN] EIL		e (CLO	4 <i>G</i>	ED:	
19 206 19	20 Factor	Erd/Ia (Units)				2.259	2.263		1.938	1,935	2.001	1.883	8981	1.8.39	2,142	2.105	2.139	
DATE: 19 /	/.00 Vehicle Fac	Rr (Ohn)	0.0352 1.779	1360,0336 1.739		132 0,0 567	132 0,0569		136 0,0418	0,0416	0,0445	136 0,0394	135 0,0388	0.0376	139 0,0510	1360,0492	38 0.0508	
ه ا	ж 8	he (m)	139	136		132	132		181	136	141	136	135	132	139	136	138	
8	0, 99 Loop Factor	Pr (kW)	5.4	5.2		8.7	8.7		6.4	6.4	6.8	1.9	6.0	5.8	7.8	7.6	2.8	
JMBER:	$K_2 = \frac{c}{Lool}$	Er (mV/m)	45.9	44.8		58.3	58.4		56.0	49.9	51.6	48.6	48.2	47.4	55,3	54.3	55.2	
SITE NUMBER:	0.98 a/Ias	Em (mV/m)	48,0	46.9		59.8	59.9		51.9	51.8	53.6	50.5	50.1	49.3	57.0	56.0	56.9	
	Κ ₁ "	I.Ag	392															
REUNION	<i>6</i> €	Eq (mV)	48.5	47.4		60.4	60.5		52,4	52.3	54.1	51.0	50.6	49.8	57.6	56.6	57.5	
İ		Tas (A)	400															
OMEGA STATION:	Distance: 15 (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30			
OMEG/	Dista (If c	Dist. (km.)	•	•	•	٠	•		·	•	٠	•	٠	•	·	٠	•	





			HELI	COPT	TER (CAL.			 •	BE	NCHM	IARK			_ R	OUTI	NE _	X -	۴	
28		*	HEIG	H	7 –	GA	<i>/</i> ~	47	د س	7,00	00 1	= 7 .		NOI:	SEY	•		,		
918 19	ctor		Erd/Ia (Units)	1.737			2.369			1.884			1.870			2.139				
DATE: 20 AUS 1978	/ OO Vehicle Factor		Rr (Ohm)	136 0.0335			0.0624			132 0,0394			0.0389			0.0508				
ءَ ا	ج ع ا		he (m)	136			139			132			135			138				
	O,99 Loop Factor		Pr (kW)	5.2			9.6			1.9			0.9			2.8				
UMBER:	K ₂ = C		Er (mV/m)	26.4			36.0			28.6			28.4			32,5				
SITE NUMBER:	$\frac{O.98}{I_a/I_{as}}$		Em (mV/m)	8.92			36.3			260			28.8			32,9				
	K ₁ =		IA)	392																
REUNION	Ø .	BELOW.	Eg (mV)	22.1			36.7			29.3			29.1			33.2				
1			(A)	400																
OPEGA STATION:	Distance: 2 (If constant)	- RANA	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
	Dista (If c	SLANT RANGE	Dist. (km.)	25.8	•	٠	•	•	٠		•	•	•	•	•	٠	•	•		٠

			HEL	I COPT	TER CAL.			•	BE	NCHM	IARK			_ R	OUTI	NE _	X_	*	
8/		•	* H	E16	HT-	6a1.	N /	4T	- 6,	00	0 4	= T.	Λ	V01	SE.	٧.			
Aug 19:	tor		Erd/Ia (Units)	608.1		2,405			1.905			1.916			2.186				
DATE: 20 AUG 1978	- / O D Vehicle Factor		Rr (Ohm)	0,0364		14/0,0643			134 0.0403			8040:0			1410,0531				
8	ж 3 п		he (m)	141		141			134			881			141				
1	0.99 Loop Factor		Pr (kW)	5,6		6.9			6.2			6.3			8.2				
MBER:	K2 = 1000		Er (mV/m)	27.4		36.4			28.8			29.0			33,1				
SITE NUMBER:	0.98 1 _a /1 _{as}		Em (mV/m)	27.8		36.7			29.2			29.4			33.5				
	K1 =	3	(A)	392															
REUNION	% E	BELOW	Eg (mV)	1187		39.1			29.5			29.7			33.8				
1	\.	RANGE	[Å)	900															
OPEGA STATION:	e: 2 stant)		Freq. (kHz)	10.20		13.60			11-1/3			11.05			12.30				
MEG	Oista (1f c	SLANT	Dist. (km.)	25.9		·	·	٠	٠		•	·	•	•	٠	•	•	•	

		HEL	I COPTER	CAL.			_•	8	ENCH	MARK			_	ROUTI	NE]	X ?	<u> </u>	
82		* #	EIGH	ナー	GA,	IN	AT	- 7,	. 0	00	FI	, ,	NO	ISE	У.			
AUG 19	ctor	Erd/Ia (Units)	1.847		2.444			1.943			1.910			2.206				
DATE: 20 AUG 1978	Vehicle Factor	Rr (Ohm)	0.0379		0.0663			0.0420			0.0405			0.0541				
	κ ω	₽Œ	144		143			136			138			/43				
1	0.99 Loop Factor	Pr (kW)	2.8		2'01			6.4			6.2			8,3				
UMBER:	^K 2 = 0	(mV/m)	28.0		37.0			29.4			28.9			33.4				
SITE NUMBER:	0,98 la/las	Em (mV/m)	28.4		37.3			8.62			29.3			33.8				
	- × ×	[¥)	392															
REUNION	2 Im., K ₁ 8 86 20 W		28.7		37.7			1.08			29.6			34.1				
1	. b	18 (A)	400															
OMEGA STATION:	E	153	10.20		13.60			11-1/3			11.05			12.30				
OMEGA	Distance (1f con SLANT	Dist. (km.)	25.9		•	٠	•	•	٠			•		٠	٠	•	•	

					100P1		AL.			_•	BE	NCHN	A RK			_ R	NT TUO	NE _	X		
AUG 1978		tor		Erd/la (Units)	1.795	1,843	1.866	2,451	2.470	2,465	2.024	2.052	2.038	2,007	2.017	2,002	2.275	2.318	2,275		
DATE: 20 /	1.00	Vehicle Factor		Rr (Ohm)	0,0358	0.0377	0.0387	143 0,0667	145 0.0678	144 0.0675	142 0.0455	1440.04702.057	1430.0462	0.0448	145 0.0452	1440.0446	147 0.0575	0.0597	0.0575		
a	يد ‼			he (m)	140	144	146	143	145	144	142	144	/43	561	145	194	147	a5/	142		
~	66'	Loop Factor		Pr (kW)	5.5	2.8	5.9	10.3	10.4	10.4	7.0	7.2	7.1	6.9	6.9	6.8	8.8	9.2	8.8		
MBER:	K ₂ = 0			Er (mV/m)	36.5	37.4	37.9	8.64	50.2	1.05	41.1	41.8	41.4	8.04	41.0	40.7	46.2	47.1	46.2		
SITE NUMBER:		la/las		Em (mV/m)	37.5	38,5	39.0	7.05	51.0	50.9	42.1	42.8	42.4	8.14	42.0	41.7	47.1	0'84	42.1		
	7.	İ		(A)	392																
REUNION	2 2		BELOW.	Eg (mV)	37.9	38.9	39.4	51.1	51.5	51.4	42,5	43.2	42.8	42.2	42.4	42.1	47.6	48.5	47.6		
j	61	; 		I. (A)	400																
OPEGA STATION:	Distance: /	(If constant)	T RANGE	Freq. (KKZ)	10.20			13.60			11-1/3			11.05			12.30				
OPEGA	Dista	(If c	LANT	Odst. (km.)	9.3	•	•	•	•				•		•	•	•	•	•	•	•

		HEL	COP	TER (CAL.			_•	BE	NCH	1ARK			_	OUTI	NE _	X		
28		7,0	00	0	FT.	•											1	•	
AUG 19	tor	Erd/Ia (Units)	1.881	1.888	1.892	2.478	2.497	2.501	2.071	2.079	2.075	2.068	2.027	2.042	2.307	2.281	2.315		
DATE: 20 AUG 1978	/, 00 Vehicle Factor	Rr (Ohm)	0,0393	147 0.0396	0.0398	145 0.0682	146 0.0693	1460.06952.501	0,0477	146 0.0480 2.079	146 0.0478 2.075	0.0475 2.068	146 0.0456 2.027	147 0.042 2.042	149 0.0591	148 0.0578			
70	κ 3	h (m)	147	147	148	145	146	146	145	146	146	149	146	147	641	851	125		
Ø	0, 99 Loop Factor	Pr (kW)	6.0	6,1	6.1	10.5	10.6	10.7	7.3	2.4	7.4	7.3	2.0	7.1	9.1	6.8	9.1		
JMBER:	K ₂ = 6001	Er (mV/m)	48.2	48.4	48.5	63.5	64.0	64.1	53.1	53.3	53.2	53.0	51.9	52.3	1.65	28.4	59.3		
SITE NUMBER:	0. 98 I _a /Ias	Em (mV/m)	50.4	7.05	20.7	1.59	65.6	65.7	55,0	55.2	55.1	55.0	54,0	54,4	0.19	60,3	61.2		
		(Å)	392																
REUNION	Z FB., K1 BELOW.	Eg (mV)	50.9	1.15	51.2	8:59	66.3	4.99	3.55	8.55	55.7	55.6	54.5	54.9	7.17	6.01	8.17		
1		(A)	400																
OMEGA STATION:	<u> </u>	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
7936	Distance (If con	Dist. (km.)	5.3	•	٠	•	•	•	•	•	•	•	•	•	•	•	•		•

82			HELI	COP1		CAL.			- •	BE	NCHN	IARK			_ R	NITUO:	NE _	×		
AUG 1978	tor		Erd/Ia (Units)	1.812	1.787		2.491	2.461		1.987	865 7		1.902	1.946		2.250	2.250			
DATE: 20	Vehicle Factor		(Ohm)	0.0365	0,0355		146 0,0689	144 0,0673 2.461		139 0,0438	140 0.0 443		137 0.0402 1. 902	1400.0421		146 0.0563	146 0.0563 2.250			
3	ج ش اا		2	/4/	139		146	144		681	140		137	140		146	146			
M	0,99 Loop Factor		Pr (KN)	5.6	5,5		10.6	10.3		6.7	8.9		6.2	6,5		8.6	816			
MBER:	*2 = 100		Er (mV/m)	46.7	46.1		64.2	63.5		51.2	51.5		49.0	50.2		58.0	0185			
SITE NUMBER:	0,98 a/las		Em)	48.9	48.2		65.9	1.57		53.2	53.5		51.0	52,1		59.9	59.9			
	K1 =		r (A)	392																
REUNION	:	RELDW	Eg (mV)	49.4	48.7		2.77	8.59		53.7	54.0		51.5	52.7		60.5	60.5			
1	1		(A)	400																
OPEGA STATION:	2 2	T RANGE	Freq. (KHZ)	10.20			13.60			11-1/3			11.05			12.30				
OFEA	Dista (1f c	SLANT	Odst. (km.)	15.2	•	•	•	•	•	•	•	•	•	•	•		•	•		

ov.				COPT		AL.			.•	BE	NCHM	ARK			R	NITUC	IE _	X		
1978		1			T			a		6	0	-1	$\overline{\Box}$	~	1	0	0	_		\neg
Aug	tor		Erd/la (Units)	1.824	1.82		2.413	2.37		2.015	1.96		1.971	1.96%		2.200	2.237			
DATE: 20 AUG	/, O D Vehicle Factor		Rr (Ohm)	142 0,0370	14300372 1.829		14/ 0,0647	1390,0627 2.376		1420,0451	138 0,0427 1.960		142 0,0432 1. 971	141 0,0428 1.962		146 0,0527	1450,0556			
8	ж 33 11		£(E	142	143		141	139		142	138		142	141		146	145			
4	O, 99 Loop Factor		Pr (KW)	5.7	5.7		6.6	9.6		6.9	6,6		6.6	6.6		8.7	8,5			
MBER:	K ₂ = 1000		Er (mV/m)	288	38.1		50.3	49.5		42.0	40.9		4/./	40.9		47.1	46.6			
SITE NUMBER:	0.98 Ia/Ias		Em (mV/m)	39.2	39.3		2115	50.4		43.1	41.9		42.2	42.0		1.8+	42.6			
	K ₁ = _6		(A)	392																
REUNION	<u>2</u> g .,	BELOW,	Eg (mV)	39.6	39.7		6.15	8.05		43.5	42.3		42.6	42.4		48.6	1.84			
	00		.€€ .€€	400																
OPEGA STATION:	기달	RANGE	Freq. (KKZ)	10.20			13.60			11-1/3			11.05			12.30				
OFEA	Distance: (If consta	SLANT	Dist. (km.)	8.81		•		٠	٠		•	•	•	•	·	•	•	•	•	•

Ø				COPT		AL.			.•	BE	NCHM	ARK			R	MITUC	íE	X	· 	
20 AUG 1978	tor		Erd/Ia (Units)	0.88.7	1.861		2.452	2.458		2.028	1.983		2.009	1867		2.303	2.285			
DATE: 30	/. OO Vehicle Factor		Rr (Ohm)	0.0380	0.0385		143 0:0668	144 0.0671		142 0.0457 2.028	0.0437		1450.0449	143 0.0436		0.0539	148 0.0580			
6	ج ا"		e(III)	144	145		143	144		142	139		145	143		149	861			
7	O. 99 Loop Factor		Pr (kW)	5.8	5,9		10.3	10.3		7.0	6.7		6.9	6.7		1.6	6.8			
MBER:	K ₂ = 0.		(mV/m)	31.5	31.7		41.8	41.9		34.6	33.8		34.2	33.8		39.2	39.0			
_ SITE NUMBER:	0.98 1 _a /1 _{as}		Em (mV/m)	32.2	32.4		42.3	42.4		35,1	34.4		34.8	34.4		34.8	39.5			
	K1 =		1. (A)	392																
REUNION	5	BELOW.	Eg (mV)	32.5	32.7		42.7	42.8		35.5	34.7		35.2	34.7		40.2	39.9			
- 1	6.3			400																
ONEGA STATION:	Distance: 22. (If constant)	T RANGE	freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
OFFEA	Dista (If c	SLANT	Cra.)	23.0	•		•	•	٠	•	•	•	•	•	•	٠	٠	•	•	

		HEL	I COP	TER (CAL.	_		_·	BE	ENCH	MARK		<u>X_</u>	_ F	I TUOS	NE _			
326											4			1					
DATE: 22 906 1978	ctor	Erd/la (Units)																	
VTE: 22	Vehicle Factor	Rr (Ohm)		_															
a	بر اا	e (m)																	
98	O. 99 Loop Factor	Pr (KW)																	
SITE NUMBER:	K2 = 1000	(mV/m)																	
SITE	0.98 Ia/Ias	Em (mV/m)																	
	7 "	I _A	392																
REUNION	44 E	Eg (mV)	31.2			40.0			33.2			32.9			37.2				
ı	•	(A)	400																
OMEGA STATION:	Distance: 24 (If constant)	Freq. (KHZ)	10.20			13.60			11-1/3			11.05			12.30				
OMEGA	Dista (1f c	Dist. (km.)	•	•	٠		•	•			•		•	٠	•	•	٠	•	•

Oista Oista	URESA SIALIUM: Distance: 24	1 .1	KEUNIUN	K ₁ = C	0,98 K2=	MBER:	0.99	رة الم	WAIE: 22	2000)
	(If constant)		•		l	Lool	p Factor		Vehicle Factor	ictor	
Dist. (km.)	Freq. (KHz)	I (%)	Eq. (mV)	1 (A)	(mV/m)	Er (mV/m)	Pr (KW)	e (E)	Rr (Ohm)	Erd/Ia (Units)	HELI
•	10.20	400	31.4	392							LUPI
•			31.7								EK L
•			31.5								ML .
	13.60		40.1								
			40.6								
			40.3								··
•	11-1/3		33.1								1
			32.7								NUHM 1 ON
•			33.2								/TO
	11.05		32.9								R S
•			33.0								S 17
•			32.3								. ^ ~
	12.30		37.3								יון וטט
			320								····
•			37.0								
•											<u> </u>
•											

UATA SHEET O (US-D)

		HELI	COPT	ER C	AL.		 _•	BE	NCHM	IARK		<u>X_</u>	R	1TUO	IE _		_	
826							 	· · · · · · · · · · · · · · · · · · ·		1		 1		· -T				
DATE: 22 AUG 1978	ctor	Erd/la (Units)																
ITE: 22	Vehicle Factor	Rr (Ohm)																
a	بر "	a m																
9 C	0,99 Loop Factor	Pr (kW)																
MBER:	K ₂ = C	Er (mV/m)																
SITE NUMBER:	0.98 I _a /Ias	Ε _m (mV/m)																
	κ ₁ =	(A)	392															
REUNION	5	Eg (mV)	31.0			39.9		32.7			33.5			36.7				
1	4	[A)	400															
OMEGA STATION:	Distance: 24 (If constant)	req. (kHz)	10.20			13.60		11-1/3			11.05			12.30				
OPEGA	Dista (If c	Dist. (km.)			٠	٠			•		•		•		•	•	•	•

		HEL	I COP	TER (CAL.	_		_•	BE	NCHN	4ARK		X	_ F	OUTI	NE _			
846					1				L		1	· · · · · ·							
DATE: 22 AUS 1978	ctor	Erd/Ia (Units)																	
	Vehicle Factor	Rr (Ohm)														İ			
	, З	he (m)																	
25	0.99 Loop Factor	Pr (KW)																	
SITE NUMBER:	K ₂ = 100	(mV/m)																	
	$\frac{O.98}{I_a/I_{as}} K_2 =$	Em (mV/m)																	
OMEGA STATION: REUNION	# !	[A]	392																
	44 E	Eg (mV)	30.9			39.9			32.7			32.8			36.7				
	•	Las (A)	400																
	Distance: 24 (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			12.30				
OPECA	Dista (If c	Dist. (km.)	•		•	•	•	•	•	٠	·		•	•		•	٠	•	•

DATA SHEET O (DS-0)

		HEL	I COP	TER (CAL.			_•	BE	NCH	1ARK		X _	_ F	1TUOS	NE _			
8			(PROBABLY BEST)																
DATE: 22 AUG 1978	ctor	Erd/Ia (Units)	1.925	1.909	1.909	2.628	2.619	2.619	2.068	2.068	2.059	2,050	2.058	2.050	2.363	2,372	2.380		
	/, 00 Vehicle Factor	Rr (Ohm)	0.0412	1490.0405	149 0.0405	154 0.0767	0.0762	0.0762	145 0.0475	(45 0.0475	1450.0471	0.0467	148 0.0471	148 0.0467	0.0621	153 0.0625	154 0.0629		
	ج ا ا	he (m)	05/	149	149	154	153	153	56/	(45	145	84/	148	86/	153	153	154		
0/	O. 99 Loop Factor	Pr (KW)	8.9	6.2	6.7	8.11	11.7	11.7	7.3	7.3	7.2	7.2	7.2	7.2	9.5	9.6	9.7		
OMEGA STATION: REUNION SITE NUMBER:	K ₂ = 100	Er (mV/m)	23.2	23.0	23.0	31.7	31.6	31.6	24.9	24.9	24.8	24.7	24.8	24.7	28.5	28.6	28.7		
	0,98 I _a /I _{as}	(mV/m)	23.5	23.3	23.3	31.9	31.8	31.8	25.1	25.1	25.0	24.9	25.0	24.9	28.7	28.8	28.9		
	K1 =	1. (A)	392																
	<i>\</i> ∂ <u>≅</u>	Eq (m∛)	23.7	23.5	23.5	32.2	32.1	32.1	25.4	25.4	25.3	25.2	25.3	25.2	29.0	29.1	29.2		
	.'.	Ias (A)	400																
	Distance: 32 (If constant)	Freq. (kHz)	10.20			13.66			11-1/3			11.05			12.30				
OMEG.	Dista (If c	Dist. (km.)	•	•	•	•	•	•	•	•	•		•			•	•	•	